SSA-S3010
SSA-S3011
SSA-S3020
SSA-S3021
SSA-S3040
SSA-S3041

Standalone Biometric Access Controller

user manual

imagine the possibilities

Thank you for purchasing this Samsung product.
To receive more complete service,
please visit our website.
www.samsungsecurity.com

SAMSUNG

safety information

CAUTION

RISK OF ELECTRIC SHOCK.
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol indicates that dangerous voltage consisting a risk of electric shock is present within this unit.

This exclamation point symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING

- To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

WARNING

1. Be sure to use only the standard adapter that is specified in the specification sheet. Using any other adapter could cause fire, electrical shock, or damage to the product.
2. Incorrectly connecting the power supply or replacing battery may cause explosion, fire, electric shock, or damage to the product.
3. Do not connect multiple controllers to a single adapter. Exceeding the capacity may cause abnormal heat generation or fire.
4. Securely plug the power cord into the power receptacle. Insecure connection may cause fire.
5. When installing the controller, fasten it securely and firmly. The fall of controller may cause personal injury.
6. Do not place conductive objects (e.g. screwdrivers, coins, metal parts, etc.) or containers filled with water on top of the controller. Doing so may cause personal injury due to fire, electric shock, or falling objects.
7. Do not install the unit in humid, dusty, or sooty locations. Doing so may cause fire or electric shock.
8. If any unusual smells or smoke come from the unit, stop using the product. In such case, immediately disconnect the power source and contact the service center. Continued use in such a condition may cause fire or electric shock.
9. If this product fails to operate normally, contact the nearest service center. Never disassemble or modify this product in any way. (SAMSUNG is not liable for problems caused by unauthorized modifications or attempted repair.)
10. When cleaning, do not spray water directly onto parts of the product. Doing so may cause fire or electric shock.

CAUTION

1. Do not drop objects on the product or apply strong blows to it. Keep away from a location subject to excessive vibration or magnetic interference.
2. Do not install in a location subject to high temperature (over 50°C), low temperature (below 0°C), or high humidity. Doing so may cause fire or electric shock.
3. If you want to relocate the already installed product, be sure to turn off the power and then move or reinstall it.
4. Remove the power plug from the outlet when there is a lighting storm. Neglecting to do so may cause fire or damage to the product.
5. Keep out of direct sunlight and heat radiation sources. It may cause fire.
6. Install it in a place with good ventilation.

7. Avoid aiming the controller directly towards extremely bright objects such as sun.
8. Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.
9. The Mains plug is used as a disconnect device and shall stay readily operable at any time.

FCC Statement

Caution : Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1) This device may not cause harmful interference, and
2) This device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, any cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus.
13. Unplug this apparatus when a card is used. Use caution when moving the cart/ apparatus combination to avoid injury from tip-over.

14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as powersupply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

contents

PRODUCT INTRODUCTION 7

7 Features
9 What's included
10 At a glance
12 Cable Color Scheme
13 Cable Selection

INSTALLATION AND EXTERNAL CONNECTION 14

14 Installing the rear template
15 Connecting the termination resistor and diode
15 Bypass Diode Connection
16 Earth-grounding the communication cables
17 I/O Connection
19 External Reader Connection
20 Communication Line Connection

INITIALIZATION 23

23 Initializing the system
24 To access the master mode
24 Registering a master ID
26 Name Display
27 User Count Setup
27 Language Setup
28 Date/Time Setup
28 Communication Address Setup
29 Baud Rate Setup
29 Factory Defaults

READER MODE SETUP 30

30 Reader #1 Mode
30 READER #2 Mode
31 READER #1 Key Input
31 READER #2 Key Input
32 Dual Fingerprint Mode
33 Adaptive Mode
33 Identification Mode

USER MANAGEMENT 34

34 Registering ID in Quick mode
35 Registering the ID
37 To delete ID
38 Viewing the ID list
38 To check the number of registered IDs
39 To remove all registered IDs
39 To check the number of registered fingerprints
40 To remove the master IDs
40 Duress Mode
41 Door Open Alarm Time Setup
41 Arm/Disarm
42 Two Men Operation Mode
42 To check the number of events
43 To remove all events
43 To remove the time schedule

I/O TIME SETUP 44

44 Exit Button Output
44 Door Contact Sensor Setup
45 Auxiliary Input #1 Setup
45 Auxiliary Input #2 Setup
46 Tamper Alarm Output Setup
46 Cut Off Output Setup
47 Duress Mode Output Setup
47 ARM/DISARM Output Setup
48 Door Open Timeout Setup
48 Output Setup for Level IDs Accessing READER #1
50 READER #1 Error Output Setup
51 Output Setup for Level IDs Accessing READER #2
52 READER #2 Error Output Setup

ADVANCED SETUP 54

54 Time Unit Setup
54 Output Time Schedule+ID
55 AntiPassBack Mode
55 Time Schedule Setup
56 Holiday Setup
57 Holiday Code Setup
58 Reader Mode Time Schedule
59 Voice Message Time Schedule
59 Output Time Schedule Setup
60 Input Time Schedule Setup
60 Input Cut Off Check Setup

contents

ADDITIONAL FEATURES 61

61 Event Memory Setup
61 ID Display
62 WIEGAND Output Setup
62 Voice Volume Setup
63 One Time Read
63 Version Check
64 Input Test
64 Output Test
65 LCD Test
65 Keypad Test
66 READER Test
66 Memory Test
67 Communication Test
67 Fingerprint Module Version Check
68 Input Type Setup

OTHER INFORMATION 69

69 Menu Structure
75 Default Settings

TROUBLESHOOTING 77

77 TroubleShooting

PRODUCT SPECIFICATIONS 79

79 Product Specifications

product introduction

FEATURES

State-of-the-art Access Controller

This product is a state-of-the-art access controller that is optimal for time and attendance management, and provides 4 input ports and 2 2Form-C relay outputs along with 2 TTL output ports, RS-232/RS-485 and TCP/IP ports to meet the high-level security system requirements and various customer needs.

With its simple manipulation and the highest security system, this product enables you to register up to 1000 persons' fingerprints (2000 fingerprints for SSA-S302X and 4000 for SSA-S304X, depending on the model), and save up to 20,000 IDs (10,000 for events) or up to 20,000 events (10,000 for IDs). All events can be transferred to the host PC before being saved to the database, and output in formats of PDF, TIF or text file using the PC applications for time and attendance management purposes.

This product consists of: a built-in fingerprint recognition module, a proximity card reader with 26 bit Wiegand(SSA-S30X1: 34 bit Wiegand), and a 24-key keypad (10 numeric keys, 2 control keys and 12 function keys) for a wide range of applications. With this, you can obtain access with any combination of your fingerprint, proximity card/PIN, and password. This product is featured by the Exit button, Motion Detector, Door Contact sensor and 4 external input ports connected to the exit alarm system preventing unauthorized access.

It also has 2 relay outputs that can control the door lock and alarm relay.

In the mean time, the graphics LCD panel supports multilingual display, enabling it operated around the world beyond the language barrier. The dual tamper switch triggers an alert if the product is forcibly disassembled.

All system settings can be configured using the front keypad or through the Windows-based software. This product works as a standalone system and is designed to operate via the network.

Standalone Operation

SSA-S30XX is connected to the external card reader, which is used to control one entrance. It determines to allow access by reading data from the internal or external card reader, and controls the open/close of the door relay and other output settings.

On an external signal (from a sensor or Exit button) reception, the device (relay) corresponding to the signal starts operating.

This product has an independent control system, assuring a normal operation regardless of problems on other systems and, not affecting them in a reversed situation.

Computer-based Management

All records of authorized or unauthorized accesses and any external signal will be saved in the internal memory. You can download such data onto your computer according to the specified communications protocol. With the downloaded data, you can store, process, create a report based on your query (access and alert details, etc) on the connected computer.

Keypad Registration

Even if SSA-S30XX is not connected to the host PC, you can use the built-in keypad and LCD module to register or delete the card or configure necessary settings independently.

Time Scheduling

SSA-S30XX is featured by so-called time schedule, which allows you to instruct it to perform a specific operation for a specific period of time. You can set a total of 10 time schedule codes, each of which can be assigned to each user.

Each time schedule code has a total of 8 different time zones including Monday through Sunday (7 time zones) plus one holiday, each of which can be divided in up to 5 different time intervals, indicating you can program different time codes.

You can also create time schedule codes to manage separate I/Os. If a time schedule code is assigned to an input device, for instance, that device will stay active only for the time specified. Each time schedule code is linked to the holiday schedule, which is void only to the holiday time code of the time schedule. (refer to "Time Scheduling" on pages 55 to 56)

product introduction

External I/O Pins

SSA-S30XX has 4 input pins and 4 output pins installed(2 relay and 2 TTL outputs) The input pins can receive signals from the Exit button and the Door Contact sensor, while the two relays can be connected to the Door Lock and the alarm device. You can specify the output time for these output pins. (Refer to "I/O Wiring" on pages 17 to 18)

Holiday Scheduling

In total, 10 holiday schedule codes are available for SSA-S30XX models, and each holiday schedule code can be configured for up to 100 holidays except Sundays. Each holiday code can be linked to the time schedule code.

You can set all holidays to holiday schedule codes, and holiday schedule code is based on the holiday time zone for the time scheduling. (Refer to "Holiday Scheduling" on page 56)

Forced Door Open Alarm

You can set the Forced Door Open Alarm to activate when the door is opened by force.

For its application, you must have installed the door contact sensor and properly set the door contact time and output settings for the alarm device. The Forced Door Open Alarm lasts until the alarm event is terminated. (Refer to "Door Contact Sensor" on page 44)

ANTIPASSBACK

A door has two card readers installed: one for the entrance, and the other for the exit, so anyone who enters should recognize his/her card on the reader at the entrance time before he can exit normally. If a person does not go under the card recognition process and just follows another person's way inside the door, the person is not allowed to exit when he/she recognizes the access card on exit card reader, and the antipassback error (APB error) occurs which will be saved into the internal memory. And you can configure to output a signal through a specific pin when such an error occurs. (Refer to "Antipassback Error Output Setup" at pages 50 and 53.)

Arm/Disarm

As long as the device is in Arm mode, the reader ports are all frozen so that no one can get access to the door and any input from the corresponding external pin will not be processed. In this mode, SSA-S30XX transmits a specific signal to the connected security devices so that they responds properly. (Refer to "Arm/Disarm" on page 41)

Door Open Timeout Alarm

The Door Open Timeout Alarm notifies the administrator of the fact with an alarm if a door stays open after the normal service time. The Door Open Timeout Alarm lasts until the door is closed.

(Refer to "Door Open Timeout Setup" on page 48)

Duress Alarm

This is used in a situation where you should open the door inevitably by a robber insisting to do so. Entering the two-digit duress alarm password with pressing the ENT button and recognizing the registered card (or card number) opens the door, while this forcibly unarmed situation will be notified to the PC application with an alarm event. (Refer to "Duress Mode" on page 40)

Two Men Operation Mode

In this mode, SSA-S30XX permits a certain person (visitor) to enter or exit only when accompanied by a special user (administrator). Both the visitor and the administrator should be authorized before they can get access. (Refer to "Registering the ID card" on page 35)

4 Levels of Individual Door Opening Time Setting

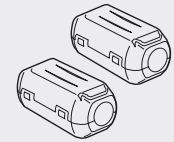
You can use this function to set 4 different door opening time points. (Refer to "Output Setup for Level IDs Accessing Reader" at pages 48 and 51.)

Name Display

SSA-S30XX can display the name of a person when the person is authorized to get access. (Refer to "Name Display" on page 26)

WHAT'S INCLUDED

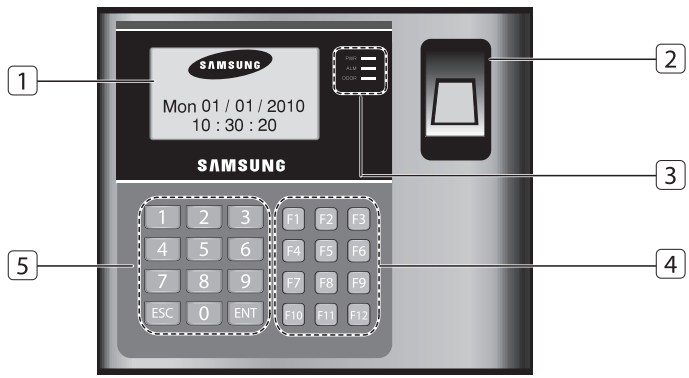
Check if the following items are included in the product package.

Main Unit	Wall Mount	CABLE: 2PIN Connector (X 1) 3PIN Connector (X 1) 4PIN Connector (X 1) 5PIN Connector (X 1) 6PIN Connector (X 1) 8PIN Connector (X 1)
Diode (X 2) (UF4004, 1N4001~4007)	Resistor (X 4) (2.2kΩ, 1/4W)	3.5 X 40mm screws (X 4) 3.5 X 12mm screws (X 4) 3 X 8mm screws (X 1) 6 X 30mm Plastic Anchor (X 4)
		
Quick Guide	CD Manual	Ferrite Cores X 2

product introduction

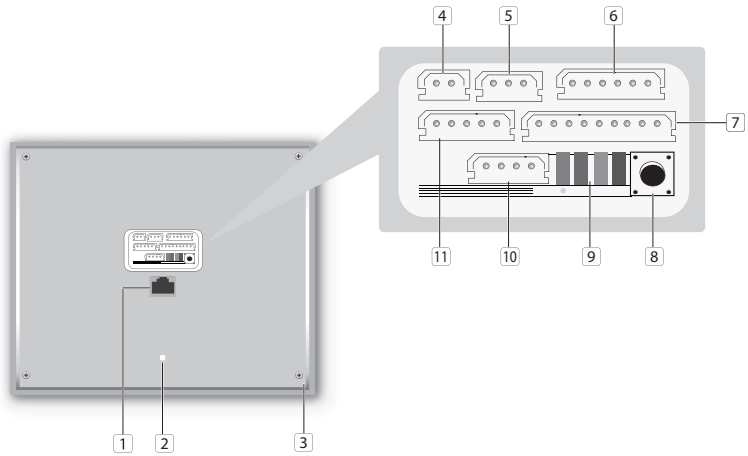
AT A GLANCE

Front Panel



1	**LCD**	This module displays the operation status of the product.
2	**Fingerprint Scanner**	Fingerprint scanner module.
3	**System Status LED**	The red indicator turns on when the product turns on. The red indicator turns on when relay #1 becomes active. The yellow indicator turns on when relay #2 becomes active.
4	**Menu Buttons**	12 menu buttons (F1 ~ F12) are available for use. Press a menu button to enter the corresponding menu. For the complete list of menus, refer to “Menu Structure”. (on pages 69 through 74)
5	**Input Keys**	Use these to enter numbers or navigate through the menu. • 4 , 6 : Left/right direction buttons • 2 , 8 : Up/down direction buttons • ENT : Select • ESC : Cancel

Rear Panel



1	RJ45 Connector	Used in TCP/IP communications.
2	Tamper Switch	Tamper switch.
3	Fixing Hole	Hole for a fixing screw.
4	2-pin Connector	Can be connected to the power cable.
5	3-pin Connector	Preliminary connector for extension.
6	6-pin Connector	Can be connected to the I/O cable.
7	8-pin Connector	Can be connected to the relay wiring cable.
8	Initialize switch	System Initialize switch.
9	LED	Communication status indicator.
10	4-pin Connector	Preliminary connector for extension.
11	5-pin Connector	Can be connected to the RS-232 and RS-485 communication cables.

CABLE COLOR SCHEME

❖ 2-PIN Connector

I/O Pins	Signal	Cable Color
Power (+12V)	DC +12V	Red
Earth-grounding	GND (-)	Black

❖ 3-PIN Connector

I/O Pins	Signal	Cable Color
RESERVED 1		Pink with White Stripes
RESERVED 2		Sky Blue with White Stripes
RESERVED 3		Black

❖ 6-PIN Connector

I/O Pins	Signal	Cable Color
TTL Output #1	TTL#1, WIK_D_OUT0	Orange with White Stripes
TTL Output #2	TTL#2, WIK_D_OUT1	Brown with White Stripes
Auxiliary Input #1	AUX_IN#1	Green
Auxiliary Input #2	AUX_IN#2	Green with White Stripes
Wiegand Data Input 0	WIK_D_IN0	Pink
Wiegand Data Input 1	WIK_D_IN1	Sky Blue

❖ 5-PIN Connector

I/O Pins	Signal	Cable Color
RS-485-RTX(+)	RS-485-A(+)	Yellow
RS-485-RTX(-)	RS-485-B(-)	Gray
RS-232-TX	TXD	Black with White Stripes
RS-232-RX	RXD	Red with White Stripes
RS-232-GND	GND	Black

❖ 8-PIN Connector

I/O Pins	Signal	Cable Color
Door RELAY(NC)	NC(1)	Blue with White Stripes
Door RELAY(COM)	COM(1)	Gray with Red Stripes
Door RELAY(NO)	NO(1)	White with Red Stripes
Alarm RELAY(NC)	NC(2)	Purple with White Stripes
Alarm RELAY(COM)	COM(2)	White
Alarm RELAY(NO)	NO(2)	Purple
Exit Button	EXIT	Orange
Door Contact Sensor	CONTACT	Yellow with Red Stripes

❖ 4-PIN Connector

I/O Pins	Signal	Cable Color
RESERVED 1		Orange with Red Stripes
RESERVED 2		Orange with Black Stripes
RESERVED 3		Blue
RESERVED 4		Brown

❖ TCP/IP RJ45 Connector

CABLE SELECTION

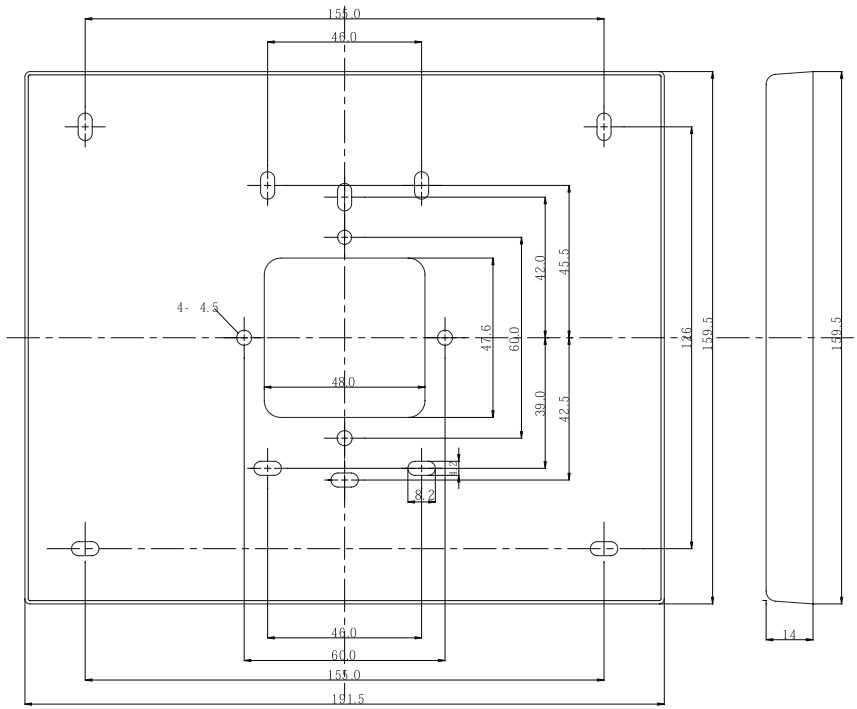
Description		Cable Type
1	Product Power (DC12V) → This product	Belden #9409, 18 AWG, 2 Conductor, Unshielded
2	Reader (power and data) External reader → This product	Belden #9512, 22 AWG, 4 Conductor, Shielded
		Belden #9514, 22 AWG, 8 Conductor, Shielded
3	Door Contact Sensor Exit Button Sensor Input Input → This product	Belden #9512, 22 AWG, 4 Conductor, Shielded
		Belden #9514, 22 AWG, 8 Conductor, Shielded
4	RS-232 Cable Converter → Host P.C.	Belden #9829, 24 AWG, 2-twisted pair, Shielded
5	RS-485 Cable This product → This product This product → Converter	Belden #9829, 24 AWG, 2-twisted pair, Shielded

installation and external connection

INSTALLING THE WALL MOUNT

Follow the instructions below to install the wall mount.

1. Place the wall mount on the installation point and mark the 4 holes for the screws. Drill at least 4 of 6-32 holes.
2. Drill a 1/2" hole on the center of the wall mount.
3. Use 4 screws to fix the wall mount to an appropriate point.
4. Arrange the cables through the center hole.
5. Connect the cable and use one screw on the bottom of the wall mount to fix it to the product.

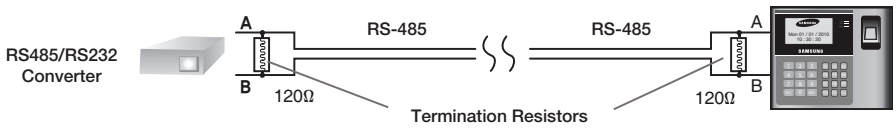


- Do not install the product on a metal wall. Otherwise, this will cause malfunction due to radio frequency interference against the wall.

CONNECTING THE TERMINATION RESISTOR AND DIODE

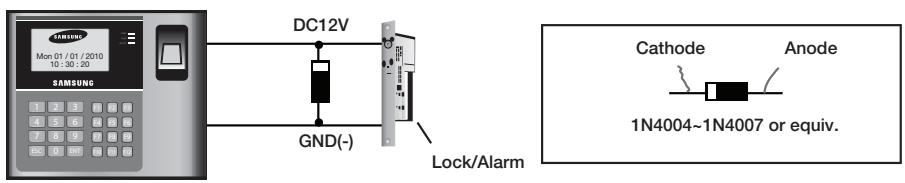
A resistor is inserted for line's impedance matching to prevent distortion and reduction in RS-422 or RS-485 long distance data communications, which is referred to as termination resistor.

Note that termination resistors of lower than 90Ω are not allowed, neither more than one termination resistor is accepted for the communications system.



BYPASS DIODE CONNECTION

If you connected an inductor (door locks or alarm device) to the output relay, there should occur a surge voltage while the inductor was turning on and off. If you do not connect a bypass diode to the relay, the surge voltage will cause damage to the electric circuit of the controller. To reduce this surge, it is recommended to connect a bypass diode between the devices.



EARTH-GROUNDING THE COMMUNICATION CABLES

We recommend you to use a proper grounding system for the communication cables.

The best grounding method is to earth-ground the shield wire of the communication cable. However, earth-grounding the communication cable isn't that easy, apart from the cost increase.

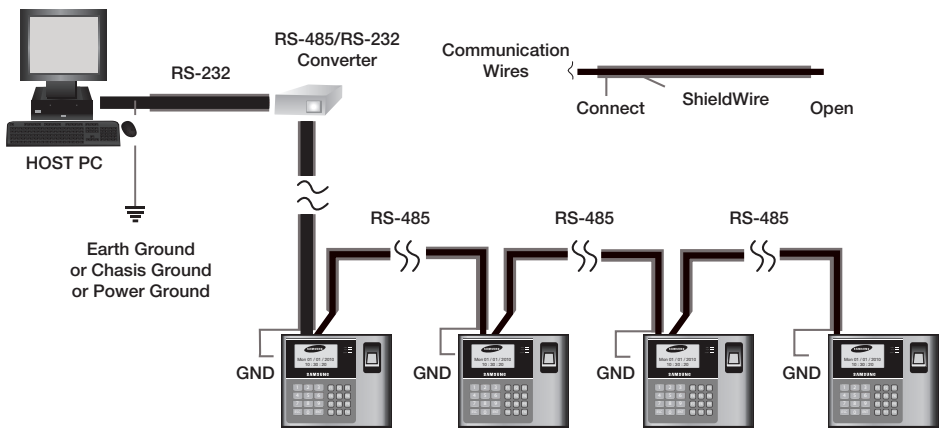
There are three grounding points available for installation:

1. Earth Ground
2. Chassis Ground
3. Power Ground

The most important thing about the earth-grounding is not connecting both ends of the shield wire to the same grounding system; Connecting both to the same end will cause a current flow through the shield wire due to the voltage level difference between the both ends of the shield wire, and this current flow will introduce some noise and interference to communications.

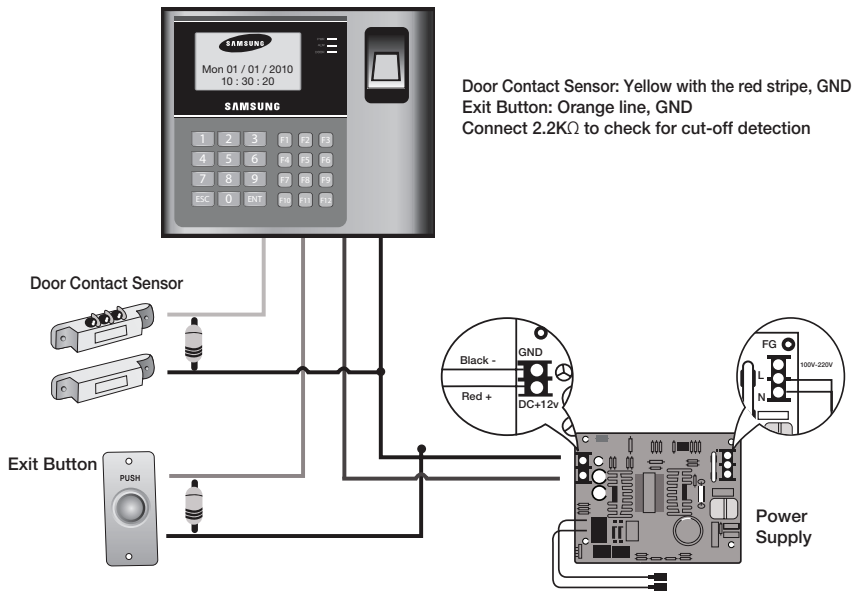
We recommend you connect ONLY one end of the shield wire of the communication cable to the grounding system. If you can locate an earth grounding point nearby, connect one end of the shield wire to that point.

If you could hardly locate an earth grounding point nearby, connect one end of the shield wire to the chassis ground point. If you could locate neither of an earth or chassis grounding point nearby, connect one end of the shield wire to the power ground point (GND). Note that if the chassis is not properly earthed and floated from the ground level, then grounding communication cable to the chassis will produce the worst communication. If this is the case, use the power grounding point rather than the chassis grounding.



I/O CONNECTION

Input Connection



1. Connect the DC 12V(+) line of the power supply unit to the red line.
2. Connect the GND(-) line of the power supply unit to the black line.

- Exit Button Connection

1. Connect one end of the Exit button to the orange line.
2. Connect the other end of the Exit button to GND

- Door Contact Sensor Connection

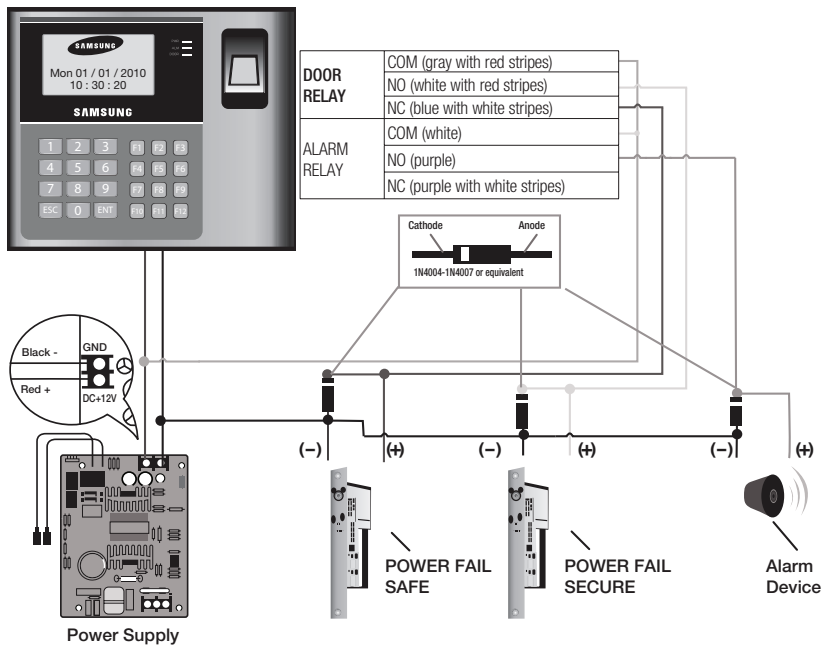
1. Connect one end of the door contact sensor to the yellow with red stripes.
2. Connect the other end of the door contact sensor to GND.

- Auxiliary Input Device Connection (auxiliary input #1 – green, auxiliary input #2 – green with white stripes)

1. Connect one end of the auxiliary input device to auxiliary input #1 or auxiliary input #2.
2. Connect the other end of the auxiliary input device to GND.

Output Connection

Connect the 8-pin connector (relay connector) of this product as follows:



- POWER FAIL SAFE: Door is opened when the power is disconnected

1. Connect the relay COM line (gray with red stripes for locking the door) to DC +12V.
2. Connect the relay NC line (blue with white stripes for locking the door) to the plus(+) line of the door lock.
3. Connect the minus (-) line of the door lock to GND (-).

- POWER FAIL SECURE: Door is closed when the power is disconnected

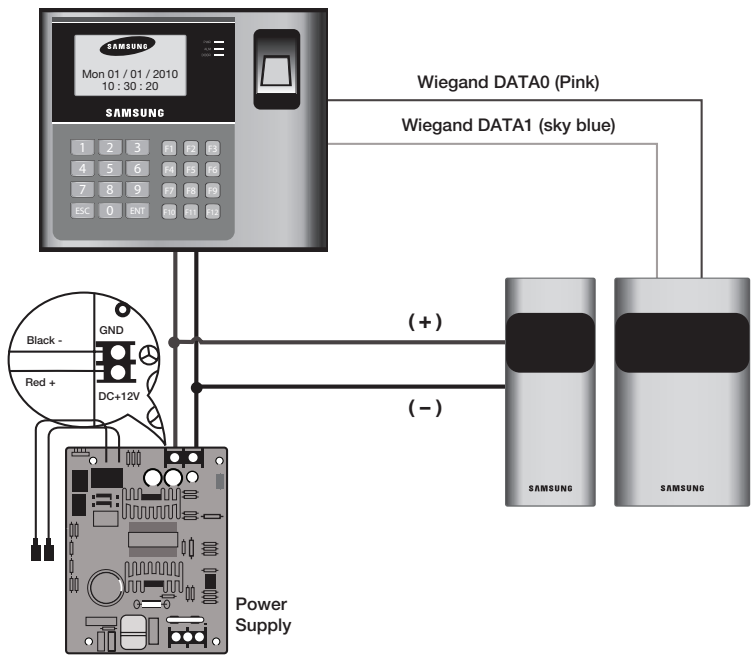
1. Connect the relay COM line (gray with red stripes for locking the door) to DC +12V.
2. Connect the relay NO line (white with red stripes for locking the door) to the plus (+) line of the door lock
3. Connect the minus (-) line of the door lock to GND (-).

- Alarm Connection (Alarm Relay)

1. Connect the relay COM (white for the alarm device) to DC +12V.
2. Connect the relay NO line (purple for the alarm device) to the plus (+) line of the alarm device.
3. Connect the minus (-) line of the alarm device to GND (-).

EXTERNAL READER CONNECTION

External Reader Connection



- Proximity Reader Connection

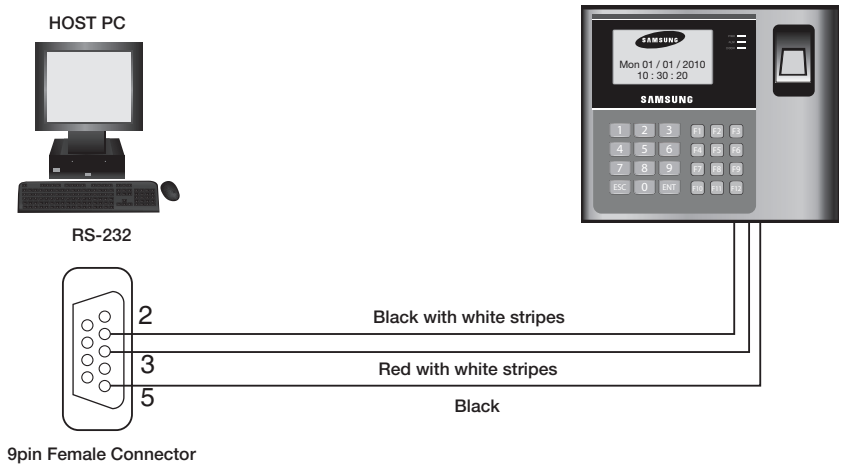
1. Connect the DC 12V(+) line of the power supply unit to the plus (+) line of the reader.
2. Connect the GND(-) line of the power supply unit to the minus(-) line of the reader
3. Connect the Wiegand data input line 0 of the proximity reader to the pink line
4. Connect the Wiegand data input line 1 of the proximity reader to the sky blue line

- For a list of compliant readers (external readers), see the followings:
  SSA-S30X0
  - Standard 26bit Wiegand format proximity reader
  - Standard 26bit Wiegand + 8bit Burst format proximity/keypad reader
  SSA-S30X1
  - Standard 34bit Wiegand format proximity reader
  - Standard 34bit Wiegand + 8bit Burst format proximity/keypad reader

COMMUNICATION LINE CONNECTION

RS-232 Communication Port Connection

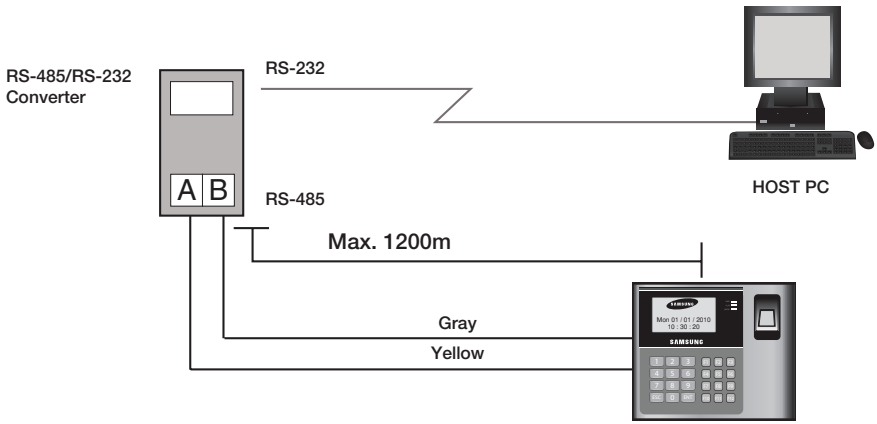
A 9-pin connector (serial communication connector, female) is needed to connect the product to the host PC via RS-232 communication. Please follow the steps below:



1. Connect RS-232 TX (Black with white stripes) to the pin #2 (RXD) of the 9-pin female connector.
2. Connect RS-232 RX (Red with white stripes) to the pin #3 (TX) of the 9-pin female connector.
3. Connect the GND (black) line of the product to pin #5 of the 9-pin female connector.
4. Plug in the 9-pin female connector to serial port (COM port) of the host PC.
5. Install and launch the application (SAMS).

RS-485 Communication Port Connection (Standalone)

A RS-485/RS-232 converter is needed to make RS485 communications between the product and the host PC.
Please follow the steps below:

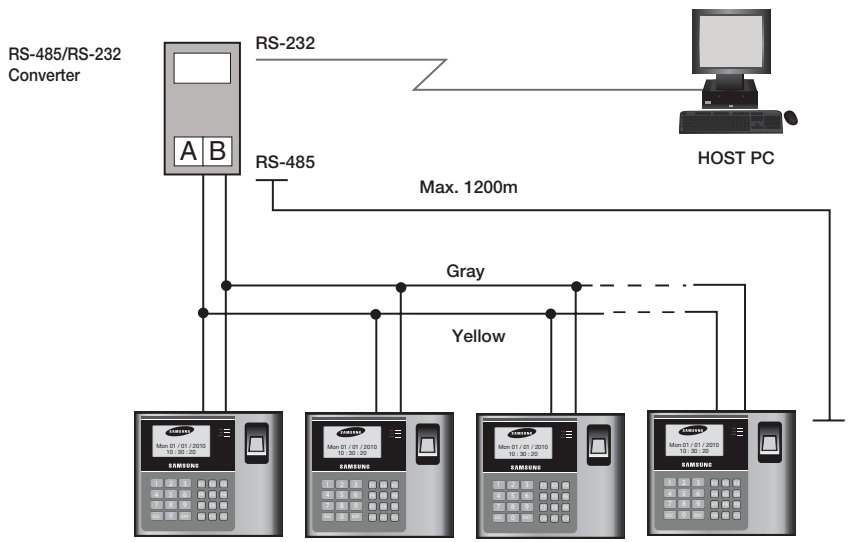


1. Connect the yellow RS-485 RTX (+) line to RS-485 A port of the converter.
2. Connect the gray RS-485 RTX (-) line to RS-485 B port of the converter.
3. Plug in the 9-pin connector (RS-232) of the converter into serial port (COM port) of the host PC.
4. Install and launch the application (SAMS).

RS-485 Communication Port Connection (Multiple Units)

A RS-485/RS-232 converter is needed to make RS-485 communications across a multiple of the products and the host PC.

Please follow the steps below:



- Connect all RS-485 ports of the product in parallel.

1. Connect the yellow RS-485 RTX (+) line of one unit to the yellow RS-485 RTX (+) line of another unit.
2. Connect the gray RS-485 RTX (-) line of one unit to the gray RS-485 RTX (-) line of another unit.
3. Set a unique communication address (COMM ADDR) for each unit.

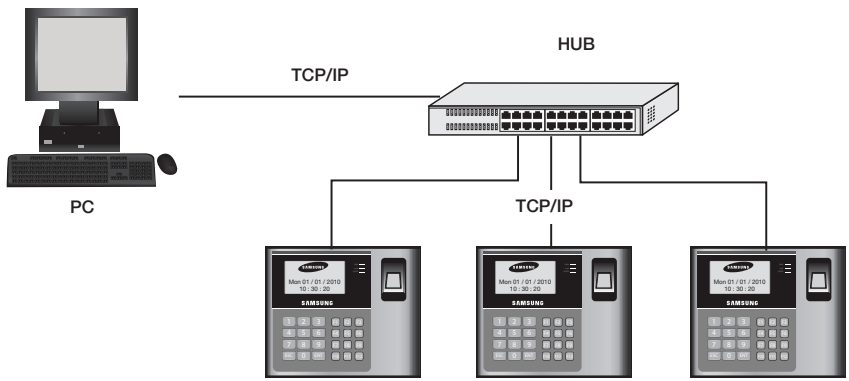
- Connect one RS-485 port of the product to the RS-485/RS-232 converter

1. Connect the yellow RS-485 RTX (+) line to the RS-485 A port of the converter.
2. Connect the gray RS-485 RTX (-) line to the RS-485 B port of the converter.
3. Plug the 9-pin connector (RS-232) of the converter into serial port (COM port) of the host PC.
4. Install and launch the application (SAMS).

▪ RS-485 connection supports multi-drop communications up to 32 units.

TCP/IP Communication Port Connection

To implement TCP/IP communications for the host PC, follow the steps below:



1. Connect the RJ45 jack of the unit to the RJ45 plug, the LAN cable of the network system.
2. Set a unique communication address (COMM ADDR) for each unit.
3. Install and launch the application (SAMS).

initialization

INITIALIZING THE SYSTEM

Initializing the system using the Initialize switch

Initialize the system using the Initialize switch on the rear of the product.

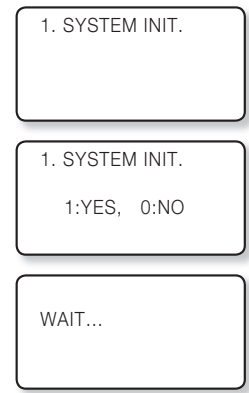
1. Check the power terminal on the rear of the product and disconnect the power cable.
2. While holding the Initialize switch, connect the power cable again.
3. While holding the Initialize switch, wait until the "**Initialize OK?**" message appears on the screen.
   It takes about 8 seconds to proceed.
   - Do not press the Initialize switch while the initialization message appears.
4. Press the button [1] to proceed with the initialization process with the **"WAIT…"** message on the screen.
   - To cancel Initializing the system, press [0] .
5. When the Initializing is done, you will move to the standby screen.

▪ Note that the initialization process will restore all previous settings to the factory default.

System Initialization in Master Mode

You can Initialize the system through authentication of the master card. For entering the master mode, see page 24.

1. Press the [F8] SETUP MENU button.
2. Use the buttons [4] and [6] to move to the **SYSTEM INIT.** item and press [ENT] .
3. The initialization screen appears.
4. Press the button [1] to proceed with the initialization process with the **"WAIT…"** message on the screen.
   - To cancel Initializing the system, press [0] .
5. When the Initializing is done, you will move to the standby screen.

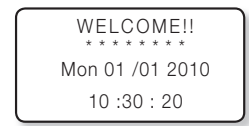


▪ Note that the initialization process will restore all previous settings to the factory default.

initialization

TO ACCESS THE MASTER MODE

1. Apply the power to the product.
2. When the booting is done, press 0 8 consecutive times (00000000) and press ENT.
   - The master number of the initialization is “00000000” (“0000000000” for SSA-S30X1).
     If you have already registered the master ID, use the ID to get access.

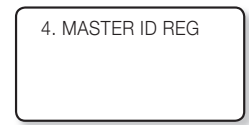


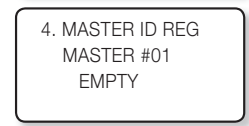
- When the system is initialized, the master number will be reset to “00000000” If you have registered the master ID, you can not get access using “00000000”.
- The master number for SSA-S30X1 is “0000000000 (10 digits)”.

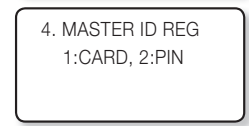
REGISTERING A MASTER ID

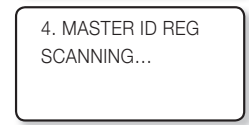
To register a master card

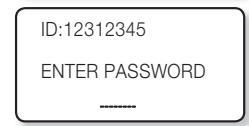
1. Press the F7 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **MASTER ID REG** item and press ENT.
3. Select a master ID index to register and press ENT.
4. To select a card, press 1.
5. Place the master card to register on the product.
6. Enter the password for the master card and press ENT.
7. Press 0 to exit registering the master ID.











To register a master card along with your fingerprint

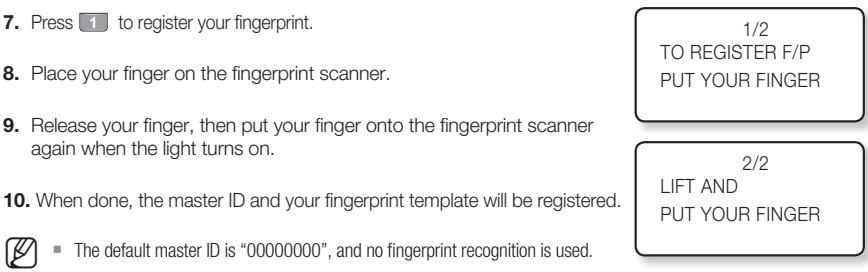
Follow the steps 1 through 6 above in "To register a master card".

7. Press [1] to register your fingerprint.

8. Place your finger on the fingerprint scanner.

9. Release your finger, then put your finger onto the fingerprint scanner again when the light turns on.

10. When done, the master ID and your fingerprint template will be registered.



- The default master ID is "00000000", and no fingerprint recognition is used.
- If at least one master ID is registered, the default master ID, "00000000", is no longer available.
- You can register up to a total of 10 master IDs (01 ~10).
- To erase a master ID, enter "00000000" for the applicable master ID.
- The master number for SSA-S30X1 is ""0000000000 (10 digits)".

To register a master card PIN

1. Press the [F7] SETUP MENU button.

2. Use the buttons [4] and [6] to move to the **MASTER ID REG** item and press [ENT].

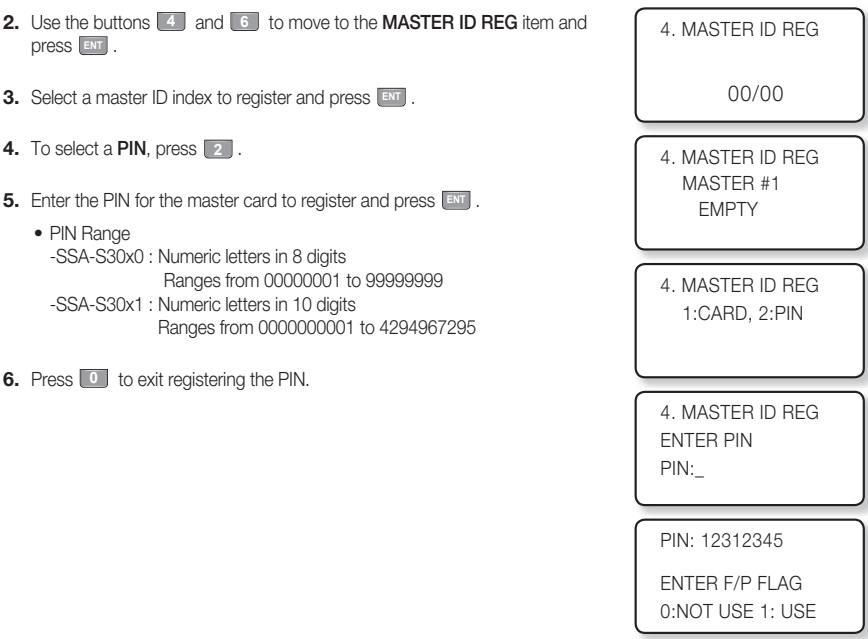
3. Select a master ID index to register and press [ENT].

4. To select a **PIN**, press [2].

5. Enter the PIN for the master card to register and press [ENT].

- PIN Range
  -SSA-S30x0 : Numeric letters in 8 digits
  Ranges from 00000001 to 99999999
  -SSA-S30x1 : Numeric letters in 10 digits
  Ranges from 0000000001 to 4294967295

6. Press [0] to exit registering the PIN.



To register a master card PIN along with your fingerprint

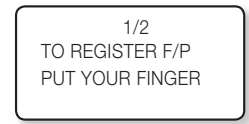
Follow the steps 1 through 5 above in "To register a master card PIN"

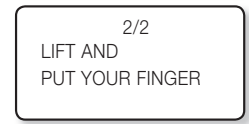
6. Press 1 to register your fingerprint.

7. Place your finger on the fingerprint scanner.

8. Release your finger, then put your finger onto the fingerprint scanner again when the light turns on.

9. When done, the master card PIN and your fingerprint template will be registered.





NAME DISPLAY

With "Name Display", you can set to display the name of a user who enters.

The user name can be downloaded by using the provided application software only, and accepts only alphabetic letters up to 8 characters. By using the unit, you can register a new user but cannot enter the user's name. In case of such a user's accessing, no name will be displayed.

1. Press the F3 SETUP MENU button.

2. Use the buttons 4 and 6 to move to the **NAME DISPLAY** item and press ENT.

3. Use the buttons 4 and 6 to select **USE** or **NOT USE**, and press ENT.

- USE : Name Display is enabled.
  NOT USE : Name Display is disabled.

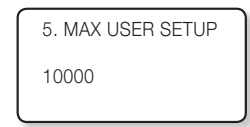
4. When done, press ENT to save your settings.

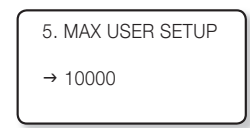
- If you set Name Display to "USE", the maximum number of IDs will be limited to 10000.
- Make sure no ID should have ever be registered before using this function.

USER COUNT SETUP

You can select the maximum number of registered users to 10,000 or 20,000.
If you set the maximum user count to 20,000, the maximum number of events will be changed to 10,000.

1. Press the F3 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **MAX USER SETUP** item and press ENT .
3. Use the buttons 4 and 6 to select a max user count.
   - 10,000 : The max user count will be set to 10,000.
     20,000 : The max user count will be set to 20,000.

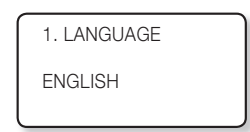


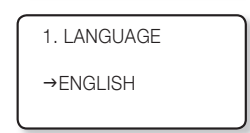


■ Before setting the user count, you must initialize the system.

LANGUAGE SETUP

1. Press the F1 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **LANGUAGE** item and press ENT .
3. Use the buttons 4 and 6 to select a max user count.
   - → ENGLISH
     → ITALIANO
     → FRANÇAIS
     (Optional language : Español, Deutsch)



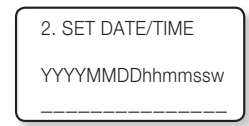


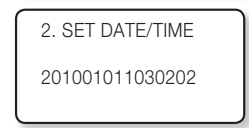
■ The default language is ENGLISH.
■ By optional, Spanish, German are supported.

initialization

DATE/TIME SETUP

1. Press the F1 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **SET DATE/TIME** item and press ENT .
3. Enter the values of year, month, day, hour, minute, second, and day of the week in sequence.
   - YYYY : Year (4 digits)
     MM : Month (2 digits)
     DD : Day (2 digits)
     hh : Hour (2 digits)
     mm : Minute (2 digits)
     ss : Second (2 digits)
     w : Day of the week (1 digit)
     1- Sunday, 2-Monday, 3-Tuesday, 4-Wednesday, 5-Thursday, 6-Friday, 7-Saturday
4. When done, press ENT to save your settings.

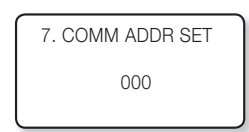


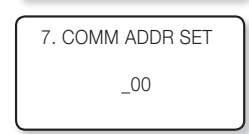


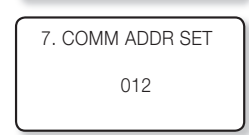
▪ Enter each value for Date/Time to fit the respective digits.

COMMUNICATION ADDRESS SETUP

1. Press the F1 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **COMM ADDR SET** item and press ENT .
3. Enter the 3-digit communication address number.
   - Ex) if you set the COMM ADDR to 12, press 012 for that.
4. When done, press ENT to save your settings.







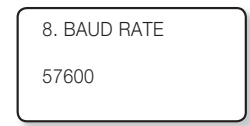
▪ The default address is set to “000”.
Select a number between 000 and 255 for the address.

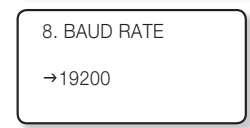
▪ Each product in the same loop should have a unique communication address.

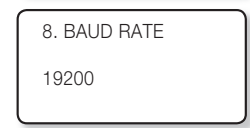
BAUD RATE SETUP

This product supports 9600, 19200, 38400, and 57600 bps, and it is set to 57600 bps by default.
An improper speed setting can cause a communication error so ensure that you specify the same speed in the same network.

1. Press the F1 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **BAUD RATE** item and press ENT.
3. Use the buttons 4 and 6 to select a serial communication speed.
   - → 9600
     → 19200
     → 38400
     → 57600
4. When done, press ENT to save your settings.





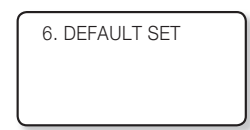


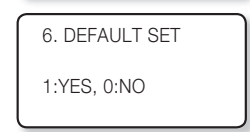
■ If you encounter a problem with the communication, check the followings first.
- Check the communication addresses for this product and the host PC (software).
- Check the baud rate settings of each of the host PC and this product.
- Check the communication port and cable.
- Check the host PC for the port settings.

FACTORY DEFAULTS

All menu settings will return to the factory default. (The memory is not deleted.)

1. Press the F8 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **DEFAULT SET** item and press ENT.
3. Press the button 1 to restore the menu settings to the default.
   - To cancel initialization, press the button 0.



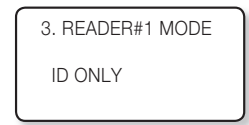


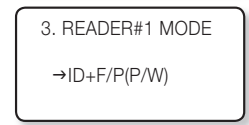
reader mode setup

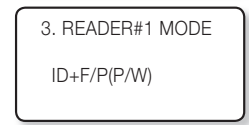
READER #1 MODE

READER#1 is the default reader that is built in this product.

1. Press the F1 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **READER#1 MODE** item and press ENT .
3. Use the buttons 4 and 6 to select a reader mode.
   3 modes are available for your choice.
   - → ID ONLY : In this mode, you can get access only with the proximity card or ID number.
   - → ID +F/P(P/W) : In this mode, you can get access through the fingerprint authentication after entering the proximity card or ID number.
     If you have not registered your fingerprint, you can get access with the password authentication.
   - → ID+P/W+F/P : In this mode, you can get access through the two-pass authentication of the password and your fingerprint after using the proximity card or entering the ID number.
4. When done, press ENT to save your settings.



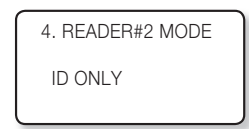


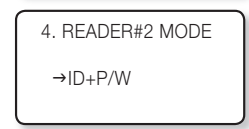


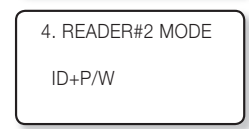
READER #2 MODE

READER#2 is an external reader for exit.

1. Press the F1 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **READER#2 MODE** item and press ENT .
3. Use the buttons 4 and 6 to select a reader mode.
   2 modes are available for your choice.
   - → ID ONLY : In this mode, you can get access only with the proximity card or ID number.
   - → ID+P/W : In this mode, you can get access through the password authentication after using the proximity card or entering the ID number.
4. When done, press ENT to save your settings.



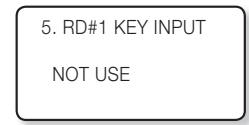


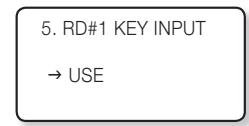


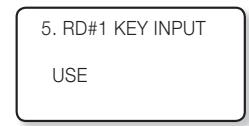
READER #1 KEY INPUT

This enables you to use the keypad (numeric keypad) of READER #1 to enter the ID.
If you want to use the registered ID (card number or PIN) to get access, set this mode to USE.

1. Press the F1 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **RD#1 KEY INPUT** item and press ENT .
3. Use the buttons 4 and 6 to select the use of the keypad of READER#1.
   - → USE : If set, you can get access using the keypad input.
   → NOT USE : If set, you can not get access using the keypad input.
4. When done, press ENT to save your settings.



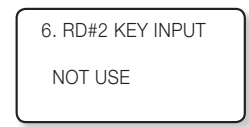


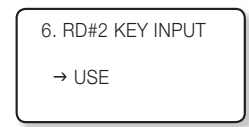


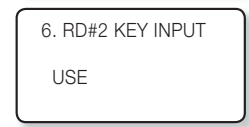
READER #2 KEY INPUT

This enables you to use the keypad of READER #2 (numeric keypad of the external device) to enter the ID.
If you want to use the registered ID (card number or PIN) to get access, set this mode to USE.

1. Press the F1 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **RD#2 KEY INPUT** item and press ENT .
3. Use the buttons 4 and 6 to select the use of the keypad of READER#2.
   - → USE : If set, you can get access using the keypad input.
   → NOT USE : If set, you can not get access using the keypad input.
4. When done, press ENT to save your settings.







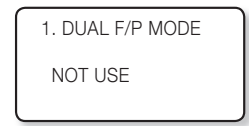
reader mode setup

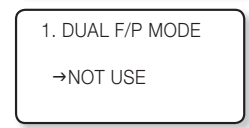
DUAL FINGERPRINT MODE

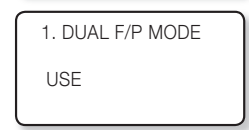
In Dual Fingerprint mode, you can register two fingerprints for one user ID.

If one of your fingers is damaged with Dual Fingerprint mode set to USE, you can use the other finger registered for the authentication.

1. Press the F10 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **DUAL F/P MODE** item and press ENT .
3. Use the buttons 4 and 6 to select the use of Dual Fingerprint mode.
   - → USE : If set, you can use the Dual Fingerprint mode.
   → NOT USE : If set, Dual Fingerprint mode is disabled.
4. When done, press ENT to save your settings.







- For registering fingerprints, see the following table.

DUAL FINGER	Template/Fingerprint Count	Success Ratio	Recommended Authentication Mode
NOT USE	2 fingerprint templates for one finger	High	Identification mode
USE	1 fingerprint template for each of 2 different fingers	Low	Verification mode

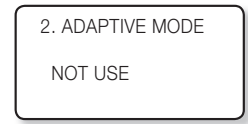
- Make sure not to mix Dual Finger enable/disable configurations for multiple units.
  Otherwise, it may degrade the recognition performance or cause data communication errors.
- If you switch the Dual Finger setup from disabled to enabled, all systems should have the consistent setups and registered fingerprints must be registered again. Switching to disabled requires the same.
- Before registering fingerprints and transfer data, make sure to setup all systems to have consistent setting at the beginning.

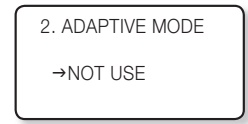
ADAPTIVE MODE

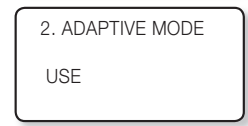
In Adaptive mode, the fingerprint image will be automatically compensated in an attempt to increase the successful recognition rate of fingerprint authentication.

1. Press the F10 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **ADAPTIVE MODE** item and press ENT .
3. Use the buttons 4 and 6 to select the use of Adaptive mode.
   - → USE : If set, you can use the Adaptive mode
   → NOT USE : If set, Adaptive mode is disabled
4. When done, press ENT to save your settings.

- In Adaptive mode, it may take longer to recognize the fingerprint.
- Registering and recognizing fingerprints in ADAPTIVE MODE, the red LED of the optical sensor blinks multiple times while capturing the fingerprint.



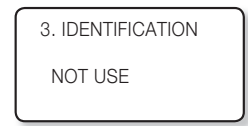


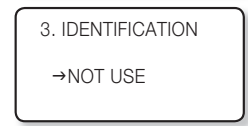


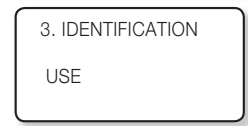
IDENTIFICATION MODE

You can select the use of 1:N Identification mode. In this mode, the product analyzes the input fingerprint against all of registered fingerprint data without demanding the input of the card or ID number, then it decides to authorize or unauthorized the access.

1. Press the F10 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **IDENTIFICATION** item and press ENT .
3. Use the buttons 4 and 6 to select the use of Identification mode.
   - → USE : If set, you can use the Identification mode
   → NOT USE : If set, Identification mode is disabled
4. When done, press ENT to save your settings.





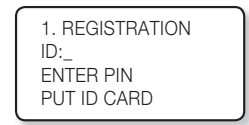


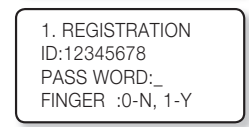
user management

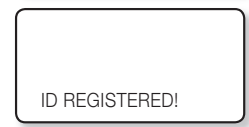
REGISTERING ID IN QUICK MODE

To register ID

1. Press the F12 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **REGISTRATION** item and press ENT.
3. Use one of the following two ways to enter an ID:
   - Place the card on the main unit to display the card ID on the screen.
   - Use the keypad to enter the number and press ENT.
4. Enter the password and select whether to use the fingerprint and press ENT.
   - Set **FINGER** to 0.
5. ID registration is completed.
   - Registering in Quick mode will set TA and TB to 00, and RD, MA, MB, LV to 0. (Refer to page 35.)



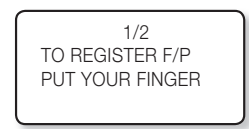


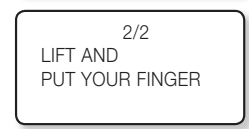


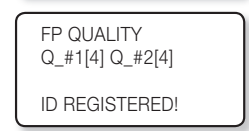
To register ID along with fingerprint

Repeat steps 1 through 3 in "To register ID" above.

4. Enter the password and select whether to use the fingerprint and press ENT.
   - Set **FINGER** to 1.
5. Place your finger on the fingerprint scanner.
6. Release your finger, then put your finger onto the fingerprint scanner again when the light turns on.
7. Your ID and fingerprint are registered.



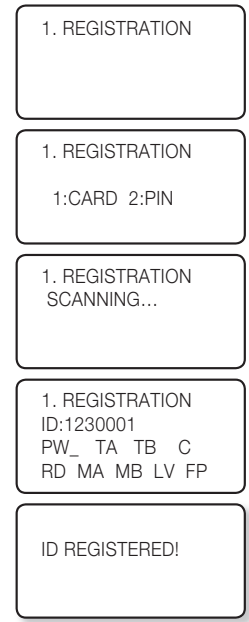




REGISTERING THE ID

To register the ID card

1. Press the F7 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **REGISTRATION** item and press ENT.
3. Press the button 1 to select **CARD**.
   - For card registration, select the card to register the ID.
     For PIN registration, select PIN and use the keypad to register the ID.
4. Put the card onto the main unit to display the card ID on the screen.
5. Set each of PW/TA/TB/C/RD/MA/MB/LV/FP.
   - For more information about each item, refer to "ID Registration Items" below.
   - Set **FP** to 0.
6. ID registration is completed.



❖ **ID Registration Item (PW /TA/TB/C/RD/MA/MB/LV/FP)**

Item	Description
PW	4-digit password used in ID+PW
TA	Time schedule code for READER#1 (Internal reader)
TB	Time schedule code for READER#2 (external reader)
C	Permission code for the user ID

NO	Description
0	Normal card
1	2-person authentication (administrator)
2	2-person authentication (visitor)
3	Set ARM/DISARM
4	Missing card

RD — Reader assignment to the card user

NO	Description
0	READER#1, READER#2 assigned
1	READER#1 assigned
2	READER#2 assigned
3	READER#1, READER#2 assigned

MA — READER#1 operation mode for the registered user

NO	Description
0	System Operation Mode
1	ID mode
2	ID+F/P(P/W)
3	ID+F/P+P/W

MB — READER#2 operation mode for the registered user

NO	Description
0	System Operation Mode
1	ID mode
2	ID+P/W

LV — Output operation level for the registered user

NO	Description
0	Output Level 1 on access authentication
1	Output Level 1 on access authentication
2	Output Level 2 on access authentication
3	Output Level 3 on access authentication
4	Output Level 4 on access authentication

FP — Use/disuse of fingerprint

NO	Description
0	Fingerprint not used.
1	Fingerprint used.

To register the ID card along with your fingerprint

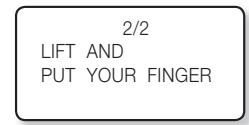
Follow the steps 1 through 4 in "To register the ID card" above

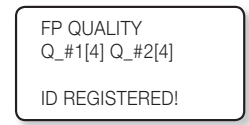
5. Set each of PW/TA/TB/C/RD/MA/MB/LV/FP.
- For more information about each item, refer to "ID Registration Items" on page 35.
- Set FP to 1.
- Press ENT .

6. Place your finger on the fingerprint scanner.

7. Release your finger, then put your finger onto the fingerprint scanner again when the light turns on.

8. Your ID and fingerprint will be registered.





To register the PIN number

1. Press the F7 SETUP MENU button.

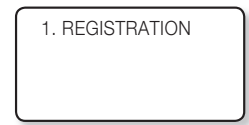
2. Use the buttons 4 and 6 to move to the **REGISTRATION** item and press ENT .

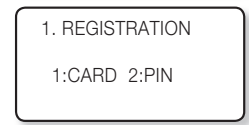
3. Press the button 2 to select **PIN**.
- For card registration, select the **CARD** to register the ID.
  For PIN registration, select **PIN** and use the keypad to register the ID.

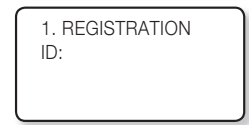
4. Use the keypad to enter the ID and press ENT .

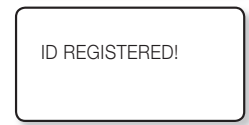
5. Set each of PW/TA/TB/C/RD/MA/MB/LV/FP.
- For more information about each item, refer to "ID Registration Items" on page 35.
- Set **FP** to 0.

6. ID registration is completed.









■ You can use the keypad to enter the ID in the following digits depending on the model.
- PIN Range
  SSA-S30x0 : Numeric letters in 4 ~ 8 digits
  Ranges from 00000001 to 99999999
  SSA-S30x1 : Numeric letters in 4 ~ 8 or 10 digits
  Ranges from 0001 to 99999999, 0000000001 to 4294967295

To register the PIN number along with your fingerprint

Follow steps 1 through 4 in “To register the PIN number” above.

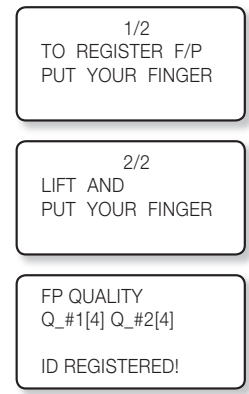
5. Set each of PW/TA/TB/C/RD/MA/MB/LV/FP.

- For more information about each item, refer to “ID Registration Items” on page 35.
- Set **FP** to 1.
- Press ENT .

6. Place your finger on the fingerprint scanner.

7. Release your finger, then put your finger onto the fingerprint scanner again when the light turns on.

8. Your ID and fingerprint will be registered.



TO DELETE ID

A registered ID can be deleted by entering the ID using the card or keypad in ID DELETE mode.
The number of the ID to delete will be displayed on the screen.

1. Press the F7 SETUP MENU button.

2. Use the buttons 4 and 6 to move to the **ID DELETE** item and press ENT .

3. Enter the ID to delete, and press ENT .

- If you enter the card, you don’t need to press ENT .

4. When the ID is deleted, you will see a message of **“ID DELETED!!!”** on the screen.

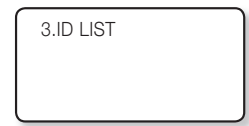
- If the entered ID is not registered with the product, you will see a message of “UNREGISTERED ID” on the screen. If an ID that is out of the acceptable range is entered , “INVALID NUMBER” message appears.
- The **ID DELETE** menu in **QUICK MODE** under [F12] is the same as **ID DELETE** under [F7].

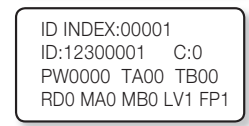
user management

VIEWING THE ID LIST

You can check the list of IDs registered with the product.

1. Press the F7 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **ID LIST** item and press ENT.
3. The list of registered IDs appears on the screen.
   - The list of registered IDs appears on the screen.
     ID INDEX : Number of registered items
     ID : ID number
     C : ID permission code
     PW : password
     TA : Time schedule of READER #1
     TB : Time schedule of READER #2
     RD : Readers accessible
     MA : Operation mode of READER #1
     MB : Operation mode of READER #2
     LV : Output level
     FP: Use/disuse of fingerprint(0:disuse, 1:Use)
4. Use the buttons 4 and 6 to check other registered IDs.



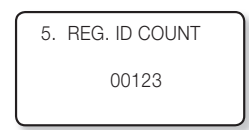


- The "EMPTY" message will appear if there is no user ID registered.
- The "FIRST ID" message indicates that the ID displayed on the screen is the first one.
- The "LAST ID" message indicates that the ID displayed on the screen is the last one.

TO CHECK THE NUMBER OF REGISTERED IDs

You can check the total number of registered IDs.

1. Press the F7 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **REG. ID COUNT** item and press ENT.
3. The number of registered IDs will be shown on the screen.

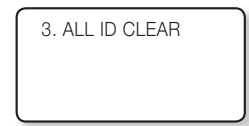


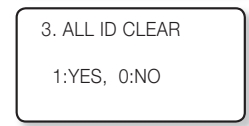
- The number of registered IDs will be displayed in 5 digits.

TO REMOVE ALL REGISTERED IDs

You can remove all of the registered user IDs.

1. Press the F8 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **ALL ID CLEAR** item and press ENT.
3. Press the button 1 to delete all registered IDs.
   - To cancel the work, press the button 0.



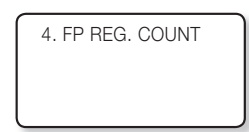


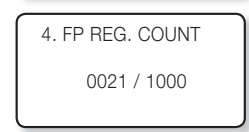
▪ Please upload the ID data to the host PC before deletion, just for backup purposes.

TO CHECK THE NUMBER OF REGISTERED FINGERPRINTS

You can check the total number of registered fingerprints.

1. Press the F10 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **FP REG. COUNT** item and press ENT.
3. The number of registered / total recordable fingerprints will be shown.

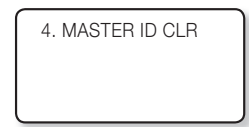


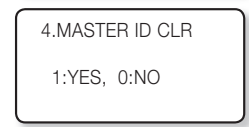


TO REMOVE THE MASTER IDs

If you want to remove all master IDs (card IDs), use this menu.

1. Press the F3 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **MASTER ID CLR** item and press ENT .
3. Press the button 1 to delete all registered master IDs.
   - To cancel the work, press the button 0 .





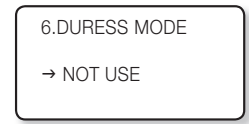
- Before removing all master IDs, ensure that the master IDs are no longer in use.

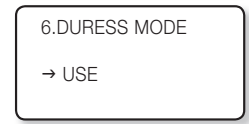
DURESS MODE

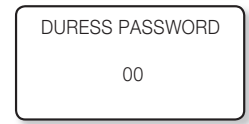
You can set Duress Mode for READER#1. Duress mode is a special feature that outputs a special alarm signal when a it is forced to open the restricted area, whose default is NOT USE. When selecting USE, you are prompted to enter the two-digit numbers for the Duress mode password, whose default is '00'.

If it is set to USE, enter the two-digit Duress password and press ENT ; this will open the door normally, but the Duress alarm signal is transmitted to the host PC.

1. Press the F2 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **DURESS MODE** item and press ENT .
3. Use the buttons 4 and 6 to select **USE**.
   - → NOT USE : Duress Mode is disabled.
     → USE : If set to USE, proceed with the followings:
4. The DURESS password is shown.
   Press ENT .
5. Enter the two-digit password and press ENT .







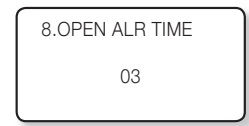
- The Duress Mode password should be different from the Arm/Disarm code.
- You can specify the output time for each signal out for Duress Alarm. (See Page 47 for "Duress Mode Output Setup".)

DOOR OPEN ALARM TIME SETUP

In this menu, you can set the delay time until the product triggers the door open alarm if the door stays open after the Door Relay time. To use this function, the Door Contact sensor should have been installed on the entrance door. (see page 17)

The default is '03'.

1. Press the F2 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **OPEN ALR TIME** item and press ENT .
3. Use the keypad to enter the time in two digits and press ENT .
   - 00 : The alarm will sound shortly if the door stays open after the Door Relay Time.
   - 01~ 98 : The alarm will sound shortly if the door stays open after both of Door Relay time and Door Delay alarm. (01~98 seconds)
   - 99 : The Door Open alarm will not sound.

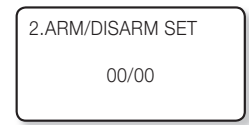


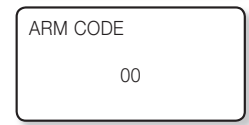
- To use this function, the Door Contact sensor should have been installed on the entrance door.

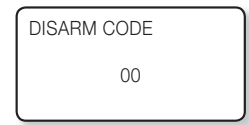
ARM/DISARM

With the ARM/DISARM code active, you can set the ARM mode by entering the ARM code and presenting the card (assigned Code 3 in registration) of a person who has the ARM/DISARM permissions. In this mode, all connected readers will not take the card input any further. To release the ARM mode, enter the DISARM code and present the ARM/DISARM card.

1. Press the F3 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **ARM/DISARM SET** item and press ENT .
3. You are prompted to enter the ARM code.
   Use the keypad to enter the ARM code in two digits and press ENT .
4. You are prompted to enter the DISARM code.
   Use the keypad to enter the DISARM code in two digits and press ENT .







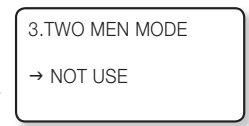
- The Arm/Disarm code should be different from the Duress Mode password.
- You can specify the output time for each signal out when ARM function is enabled. (See Page 47 for "ARM/DISARM Output Setup".)

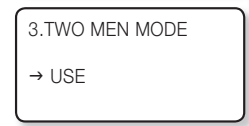
user management

TWO MEN OPERATION MODE

With TWO MEN MODE active, the door will be opened if both administrator card and visitor card are entered in a row within 10 seconds.

1. Press the F3 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **TWO MEN MODE** item and press ENT.
3. Use the buttons 4 and 6 to select **USE** or **NOT USE**, and press ENT.
   - → USE : TWO MEN MODE is enabled.
     → NOT USE : TWO MEN MODE is disabled.





- To enable this function, the preferred administrator card should be assigned code 1, while the visitor card be assigned code 2. (See Page 35 for "Registering the ID ".)

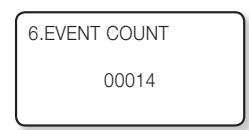
TO CHECK THE NUMBER OF EVENTS

You can check the total number of events stored in the memory. When an event is stored in the memory, the count will increase accordingly.

The total number of events is 20,000.

Once a specific event is uploaded successfully to the host PC, it will be removed from the internal memory.

1. Press the F7 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **EVENT COUNT** item.
3. The number of events stored in the memory will be shown.

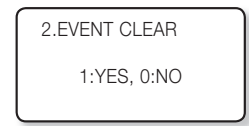


- To remove the event, refer to "To delete all events". (see page 43)
- The number of registered IDs will be displayed in 5 digits.
- When the memory is full, please refer to "Event Memory Setup". (see page 61)

TO REMOVE ALL EVENTS

If the event memory is full or you want to change the number of IDs, you can use this menu to clear the event memory.

1. Press the F8 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **EVENT CLEAR** item and press ENT .
3. Press the button 1 to remove all events.
   - To cancel the work, press the button 0.

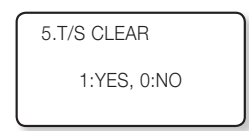


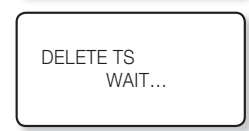
▪ To reserve the events, upload them to the host PC before deletion.

TO REMOVE THE TIME SCHEDULE

All time schedules (01~10), all holiday schedules (01~10), holiday codes, and time schedules for reader#1 and reader#2 modes can be deleted. With the ENT button pressed, press the 1 button to remove all time schedules or press the 0 button to cancel the work.

1. Press the F8 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **T/S CLEAR** item and press ENT .
3. Press the button 1 to remove all time schedules.
   - To cancel the work, press the button 0 .
   - You will see the message as shown at the right.





▪ Before removing all time schedules, ensure that they are no longer in use.

I/O time setup

EXIT BUTTON OUTPUT

1. Press the F5 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **EXIT BUTTON** item and press ENT .
3. You can make input when the prompt blinks.
   - Use the keypad to enter the time for each output operation and press ENT .
     DR : Door relay output
     AR : Alarm relay output
     T1 : TTL #1 output
     T2 : TTL #2 output
     BZ : Buzzer output

- The output time differs, depending on the time unit.
  If the time unit is 0.1 (second), you can specify the value between 0.0 and 9.8 second; if set to 1 (second), you can specify between 0 and 98 seconds.
  For the time unit, refer to the 'Time Unit Setup' under the advanced setup. (see page 54)
- If you enter 99 for the value, the product stays in output mode until you change the setting regardless of the time unit.

DOOR CONTACT SENSOR SETUP

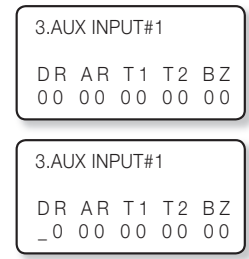
You can specify the signal output if a door is forcibly opened without through the normal authentication process. (The Door Contact sensor should have been installed.)

1. Press the F5 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **DOOR CONTACT** item and press ENT .
3. You can make input when the prompt blinks.
   - Use the keypad to enter the time for each output operation and press ENT .
     DR : Door relay output
     AR : Alarm relay output
     T1 : TTL #1 output
     T2 : TTL #2 output
     BZ : Buzzer output

- The output time differs, depending on the time unit.
  If the time unit is 0.1 (second), you can specify the value between 0.0 and 9.8 second; if set to 1 (second), you can specify between 0 and 98 seconds.
  For the time unit, refer to the 'Time Unit Setup' under the advanced setup. (see page 54)
- If you enter 99 for the value, the product stays in output mode until you change the setting regardless of the time unit.

AUXILIARY INPUT #1 SETUP

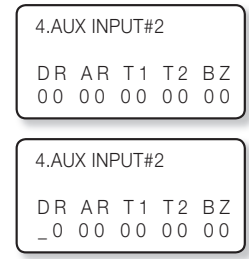
1. Press the F5 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **AUX INPUT #1** item and press ENT.
3. You can make input when the prompt blinks.
   - Use the keypad to enter the time for each output operation and press ENT.
     DR : Door relay output
     AR : Alarm relay output
     T1 : TTL #1 output
     T2 : TTL #2 output
     BZ : Buzzer output



- The output time differs, depending on the time unit.
  If the time unit is 0.1 (second), you can specify the value between 0.0 and 9.8 second; if set to 1 (second), you can specify between 0 and 98 seconds.
  For the time unit, refer to the 'Time Unit Setup' under the advanced setup. (see page 54)
- If you enter 99 for the value, the product stays in output mode until you change the setting regardless of the time unit.

AUXILIARY INPUT #2 SETUP

1. Press the F5 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **AUX INPUT #2** item and press ENT.
3. You can make input when the prompt blinks.
   - Use the keypad to enter the time for each output operation and press ENT.
     DR : Door relay output
     AR : Alarm relay output
     T1 : TTL #1 output
     T2 : TTL #2 output
     BZ : Buzzer output



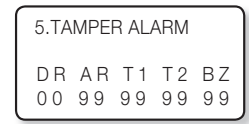
- The output time differs, depending on the time unit.
  If the time unit is 0.1 (second), you can specify the value between 0.0 and 9.8 second; if set to 1 (second), you can specify between 0 and 98 seconds.
  For the time unit, refer to the 'Time Unit Setup' under the advanced setup. (see page 54)
- If you enter 99 for the value, the product stays in output mode until you change the setting regardless of the time unit.

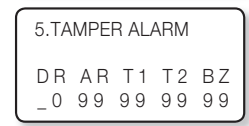
I/O time setup

TAMPER ALARM OUTPUT SETUP

You can set the signal that you want to output if the device is dismantled forcibly.

1. Press the F3 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **TAMPER ALARM** item and press ENT.
3. You can make input when the prompt blinks.
   - Use the keypad to enter the time for each output operation and press ENT.
     DR : Door relay output
     AR : Alarm relay output
     T1 : TTL #1 output
     T2 : TTL #2 output
     BZ : Buzzer output



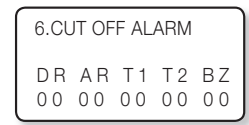


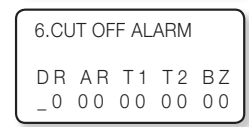
- The output time differs, depending on the time unit.
  If the time unit is 0.1 (second), you can specify the value between 0.0 and 9.8 second; if set to 1 (second), you can specify between 0 and 98 seconds.
  For the time unit, refer to the 'Time Unit Setup' under the advanced setup. (see page 54)
- If you enter 99 for the value, the product stays in output mode until you change the setting regardless of the time unit.

CUT OFF OUTPUT SETUP

You can set the output options when any of the input line is cut off.
The input cutoff check should have been activated. (see page 60)

1. Press the F3 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **CUT OFF ALARM** item and press ENT.
3. You can make input when the prompt blinks.
   - Use the keypad to enter the time for each output operation and press ENT.
     DR : Door relay output
     AR : Alarm relay output
     T1 : TTL #1 output
     T2 : TTL #2 output
     BZ : Buzzer output



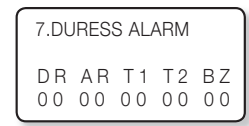


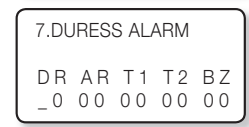
- The output time differs, depending on the time unit.
  If the time unit is 0.1 (second), you can specify the value between 0.0 and 9.8 second; if set to 1 (second), you can specify between 0 and 98 seconds.
  For the time unit, refer to the 'Time Unit Setup' under the advanced setup. (see page 54)
- If you enter 99 for the value, the product stays in output mode until you change the setting regardless of the time unit.

DURESS MODE OUTPUT SETUP

You can specify the output time for Duress mode.

1. Press the F5 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **DURESS ALARM** item and press ENT.
3. You can make input when the prompt blinks.
   - Use the keypad to enter the time for each output operation and press ENT.
     DR : Door relay output
     AR : Alarm relay output
     T1 : TTL #1 output
     T2 : TTL #2 output
     BZ : Buzzer output



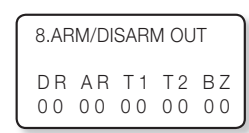


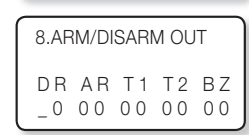
- Duress Alarm must be enabled (See Page 40 for "Duress Mode".)
- The output time differs, depending on the time unit.
  If the time unit is 0.1 (second), you can specify the value between 0.0 and 9.8 second; if set to 1 (second), you can specify between 0 and 98 seconds.
  For the time unit, refer to the 'Time Unit Setup' under the advanced setup. (see page 54)
- If you enter 99 for the value, the product stays in output mode until you change the setting regardless of the time unit.

ARM/DISARM OUTPUT SETUP

You can specify the output time for ARM/DISARM mode.

1. Press the F5 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **ARM/DISARM SET** item and press ENT.
3. You can make input when the prompt blinks.
   - Use the keypad to enter the time for each output operation and press ENT.
     DR : Door relay output
     AR : Alarm relay output
     T1 : TTL #1 output
     T2 : TTL #2 output
     BZ : Buzzer output





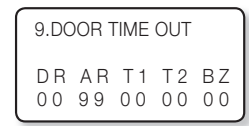
- ARM/DISARM must be enabled. (See Page 41 for "Arm/Disarm".)
- The output time differs, depending on the time unit.
  If the time unit is 0.1 (second), you can specify the value between 0.0 and 9.8 second; if set to 1 (second), you can specify between 0 and 98 seconds.
  For the time unit, refer to the 'Time Unit Setup' under the advanced setup. (see page 54)
- If you enter 99 for the value, the product stays in output mode until you change the setting regardless of the time unit.

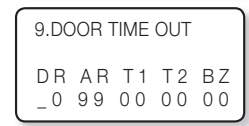
I/O time setup

DOOR OPEN TIMEOUT SETUP

You can set the alarm to sound if the door stays open after a specific wait time from when it opens.

1. Press the F6 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **DOOR TIME OUT** item and press ENT .
3. You can make input when the prompt blinks.
   - Use the keypad to enter the time for each output operation and press ENT .
     DR : Door relay output
     AR : Alarm relay output
     T1 : TTL #1 output
     T2 : TTL #2 output
     BZ : Buzzer output



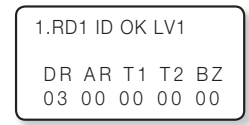


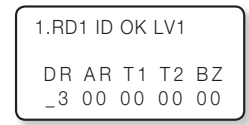
- The output time differs, depending on the time unit.
  If the time unit is 0.1 (second), you can specify the value between 0.0 and 9.8 second; if set to 1 (second), you can specify between 0 and 98 seconds.
  For the time unit, refer to the 'Time Unit Setup' under the advanced setup. (see page 54)
- If you enter 99 for the value, the product stays in output mode until you change the setting regardless of the time unit.

OUTPUT SETUP FOR LEVEL IDs ACCESSING READER #1

Output Setup for the event of Level 1 IDs accessing the READER #1

1. Press the F6 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **RD1 ID OK LV1** item and press ENT .
3. You can make input when the prompt blinks.
   - Use the keypad to enter the time for each output operation and press ENT .
     DR : Door relay output
     AR : Alarm relay output
     T1 : TTL #1 output
     T2 : TTL #2 output
     BZ : Buzzer output





- The output time differs, depending on the time unit.
  If the time unit is 0.1 (second), you can specify the value between 0.0 and 9.8 second; if set to 1 (second), you can specify between 0 and 98 seconds.
  For the time unit, refer to the 'Time Unit Setup' under the advanced setup. (see page 54)
- If you enter 99 for the value, the product stays in output mode until you change the setting regardless of the time unit.

Output Setup for Level 2 IDs Accessing READER #1

1. Press the F6 SETUP MENU button.

2. Use the buttons 4 and 6 to move to the **RD1 ID OK LV2** item and press ENT .

- The operation time for each output is the same as in "Output Setup for Level 1 IDs Accessing READER #1" above. (see page 48)

Output Setup for Level 3 IDs Accessing READER #1

1. Press the F6 SETUP MENU button.

2. Use the buttons 4 and 6 to move to the **RD1 ID OK LV3** item and press ENT .

- The operation time for each output is the same as in "Output Setup for Level 1 IDs Accessing READER #1" above. (see page 48)

Output Setup for Level 4 IDs Accessing READER #1

1. Press the F6 SETUP MENU button.

2. Use the buttons 4 and 6 to move to the **RD1 ID OK LV4** item and press ENT .

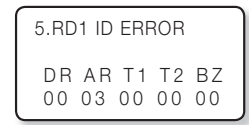
- The operation time for each output is the same as in "Output Setup for Level 1 IDs Accessing READER #1" above. (see page 48)

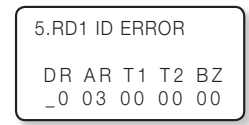
I/O time setup

READER #1 ERROR OUTPUT SETUP

READER #1 ID Error Output Setup

1. Press the F6 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **RD1 ID ERROR** item and press ENT.
3. You can make input when the prompt blinks.
   - If you enter '00', no output setting is configured.
   - Use the keypad to enter the time for each output operation and press ENT.
     DR : Door relay output
     AR : Alarm relay output
     T1 : TTL #1 output
     T2 : TTL #2 output
     BZ : Buzzer output

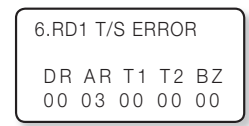




- The output time differs, depending on the time unit.
  If the time unit is 0.1 (second), you can specify the value between 0.0 and 9.8 second; if set to 1 (second), you can specify between 0 and 98 seconds.
  For the time unit, refer to the 'Time Unit Setup' under the advanced setup. (see page 54)
- If you enter 99 for the value, the product stays in output mode until you change the setting regardless of the time unit.

READER #1 Time Schedule Error Output Setup

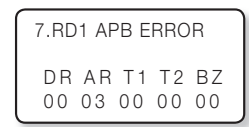
1. Press the F6 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **RD1 T/S ERROR** item and press ENT.
   - The operation time for each output is the same as in "READER #1 ID Error Output Setup" above.



- Time schedule must be configured before. (See Page 55 for "Time Schedule Setup".)

READER #1 Antipassback Error Output Setup

1. Press the F6 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **RD1 APB ERROR** item and press ENT.
   - The operation time for each output is the same as in "READER #1 ID Error Output Setup" above.



- APB mode must be enabled before. (See Page 55 for "AntiPassBack Mode".)

OUTPUT SETUP FOR LEVEL IDS ACCESSING READER #2

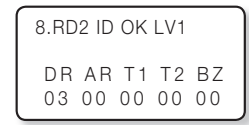
Output Setup for the event of Level 1 IDs accessing the READER #2

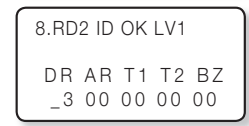
1. Press the F6 SETUP MENU button.

2. Use the buttons 4 and 6 to move to the **RD2 ID OK LV1** item and press ENT.

3. You can make input when the prompt blinks.

- If you enter '00', no output setting is configured.
- Use the keypad to enter the time for each output operation and press ENT.
  DR : Door relay output
  AR : Alarm relay output
  T1 : TTL #1 output
  T2 : TTL #2 output
  BZ : Buzzer output





- The output time differs, depending on the time unit.
  If the time unit is 0.1 (second), you can specify the value between 0.0 and 9.8 second; if set to 1 (second), you can specify between 0 and 98 seconds.
  For the time unit, refer to the 'Time Unit Setup' under the advanced setup. (see page 54)
- If you enter 99 for the value, the product stays in output mode until you change the setting regardless of the time unit.

Output Setup for the event of Level 2 IDs accessing the READER #2

1. Press the F6 SETUP MENU button.

2. Use the buttons 4 and 6 to move to the **RD2 ID OK LV2** item and press ENT.

- The operation time for each output is the same as in "Output Setup for Level 1 IDs Accessing READER #2" above.

Output Setup for the event of Level 3 IDs accessing the READER #2

1. Press the F6 SETUP MENU button.

2. Use the buttons 4 and 6 to move to the **RD2 ID OK LV3** item and press ENT.

- The operation time for each output is the same as in "Output Setup for Level 1 IDs Accessing READER #2" above.

I/O time setup

Output Setup for Level 4 IDs Accessing READER #2

1. Press the F6 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **RD2 ID OK LV4** item and press ENT .
   - The operation time for each output is the same as in "Output Setup for Level 1 IDs Accessing READER #2" above. (see page 51)

```
11.RD2 ID OK LV4

 DR AR T1 T2 BZ
 05 00 00 00 00
```

READER #2 ERROR OUTPUT SETUP

READER #2 ID Error Output Setup

1. Press the F6 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **RD2 ID ERROR** item and press ENT .
3. You can make input when the prompt blinks.
   - If you enter '00', no output setting is configured.
   - Use the keypad to enter the time for each output operation and press ENT .
     DR : Door relay output
     AR : Alarm relay output
     T1 : TTL #1 output
     T2 : TTL #2 output
     BZ : Buzzer output

```
12.RD2 ID ERROR

 DR AR T1 T2 BZ
 00 03 00 00 00
```

```
12.RD2 ID ERROR

 DR AR T1 T2 BZ
 _0 03 00 00 00
```

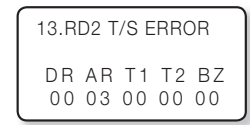
- The output time differs, depending on the time unit.
  If the time unit is 0.1 (second), you can specify the value between 0.0 and 9.8 second; if set to 1 (second), you can specify between 0 and 98 seconds.
  For the time unit, refer to the 'Time Unit Setup' under the advanced setup. (see page 54)
- If you enter 99 for the value, the product stays in output mode until you change the setting regardless of the time unit.

READER #2 Time Schedule Error Output Setup

1. Press the F6 SETUP MENU button.

2. Use the buttons 4 and 6 to move to the **RD2 T/S ERROR** item and press ENT .

- The operation time for each output is the same as in "READER #2 ID Error Output Setup" above. (see page 52)



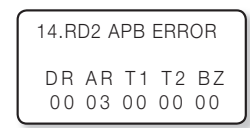
▪ Time schedule must be configured before. (See Page 55 for "Time Schedule Setup".)

READER #2 Antipassback Error Output Setup

1. Press the F6 SETUP MENU button.

2. Use the buttons 4 and 6 to move to the **RD2 APB ERROR** item and press ENT .

- The operation time for each output is the same as in "READER #2 ID Error Output Setup" above. (see page 52)

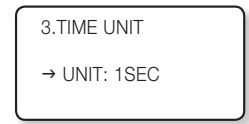


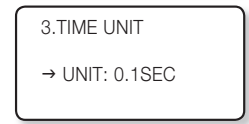
▪ APB mode must be enabled before. (See Page 55 for "AntiPassBack Mode".)

TIME UNIT SETUP

You can use this menu to specify the time unit.

1. Press the F2 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **TIME UNIT** item and press ENT .
3. Use the buttons 4 and 6 to specify the time unit and press ENT .
   - → UNIT: 1SEC : The output time is calculated by the second in the I/O setup.
   - → UNIT: 0.1SEC : The output time is calculated by the 1/10 second (100ms) in the I/O setup.





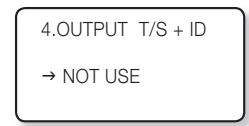
- The default is set to "UNIT: 1SEC".
- see the following example
  If you want to keep the Door Relay (Relay #1, DR) active for 3 seconds, follow the steps below:
  - Set the time unit to 1 second.
  - Set the Door Relay (DR) output time to "03".

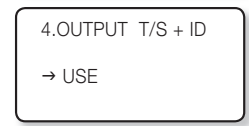
  If you want to keep the Door Relay (Relay # 1, DR) active for o.5 second, follow the steps below:
  - Set the time unit to 0.1 second.
  - Set the Door Relay (DR) output time to "05".
- Your change to the time unit will affect all I/O time settings.

OUTPUT TIME SCHEDULE+ID

The Output T/S+ID feature is used, in particular, in opening the door for a specified time period in a specific time schedule. However, you can set it not to open the door after the specified time unless a user entry (i.e., entering the ID) is attempted. The closing time is, of course, the end point of the specified time period.

1. Press the F2 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **OUTPUT T/S + ID** item and press ENT .
3. Use the buttons 4 and 6 to select **USE** or **NOT USE**, and press ENT .
   - → NOT USE : The entrance door is set to be open when it reaches the specified time in the time schedule code.
   - → USE : The entrance door will be not open when it reaches the specified time in the time schedule code, but is open when a registered user is authenticated.



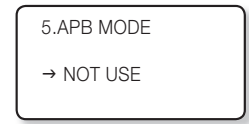


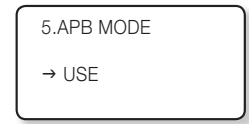
- Time schedule must be configured before. (See Page 59 for "Time Schedule Setup".)
- The Output T/S + ID is set to "NOT USE" by default.

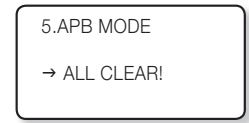
ANTIPASSBACK MODE

Antipassback mode is used to prevent an identical user from entering or exiting the door twice or more consecutively. This mode is available only with an Exit reader dedicated to detecting exits, which is not available in a system that is solely using the Exit button to exit the door.

1. Press the F2 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **APB MODE** item and press ENT .
3. Use the buttons 4 and 6 to select a desired mode and press ENT .
   - → NOT USE : The Antipassback mode is disabled.
     → USE : The Anti-Pass Back mode is enabled.
     → ALL CLEAR! : If entrance or exit is not allowed because of violation of the Anti-Pass Back rules, this will reset the status and resume allowing users to enter or exit the door.







- The Antipass back mode is set to “NOT USE” by default.
- You can configure the APB error outputs for each reader on the entrance and exit. (Refer to “Antipassback Error Output Setup” at pages 50 and 53.)

TIME SCHEDULE SETUP

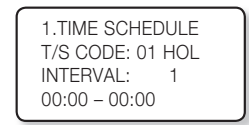
You can set a total of 10 Time Schedule codes. The default code is “00”, which is used to allow unlimited access.

Each Time Schedule code has 8 programmable days (Sunday through Saturday, and a holiday), each of which has 5 time intervals.

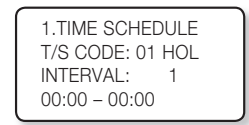
You can check information such as Time Schedule code, day of the week, time interval and current Time Schedule setting. A holiday in the Time Schedule is linked to a holiday schedule code.

The Time Schedule is based on 24-hour format and therefore “00:00” and “24:00” refer to the same time.

1. Press the F4 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **TIME SCHEDULE** item and press ENT .
3. Use the 4 and 6 , 2 , 8 buttons to specify the interval, day and code and press ENT .
   - → T/S CODE : Time Schedule Code 01~10
     → Weekly : 8 days (HOL,SUN,MON,TUE,WED,THU,FRI,SAT)
     → INTERVAL : Time interval 1~5
     → 00:00 – 00:00 : hour : min



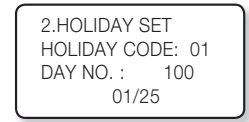
4. Use the numeric buttons to enter start or end time in 8 digits.
   - If an entry is invalid, the **"INVALID NUMBER"** message will appear.
5. Repeat steps 3 through 4 above to set other time schedules.
6. Upon completion of all time schedules, press ESC to exit from the menu.

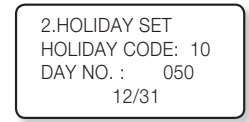


HOLIDAY SETUP

This feature allows you to set holidays of your choice.
Each of 10 Holiday Codes can have up to 100 programmable holidays.
You can view holiday information set on each holiday code.

1. Press the F4 SETUP MENU button.
2. Use the buttons 4 and 6 to move to **HOLIDAY SET** and press ENT.
3. Use the 4, 6, 2 and 8 buttons to select **HOLIDAY CODE**, and **DAY NO** and press ENT.
   - → HOLIDAY CODE : 01~10
     → DAY NO. : 001~100
4. Use the numeric buttons to enter 4-digit month/day and press ENT.
   - If the entry is incorrect, the **"INVALID NUMBER"** message will appear.
5. Repeat steps 3 through 4 to set other holiday schedule codes.
6. Upon completion of all holiday schedule settings, exit the menu by pressing ESC.





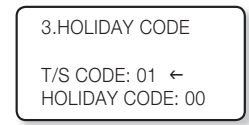
HOLIDAY CODE SETUP

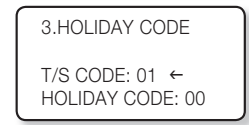
The Holiday Code setting allows you to link a Holiday Schedule to a Time Schedule.. A Time Schedule has 5 Time Intervals for holidays and the Time Intervals are applied only to the dates of this Holiday Schedule.

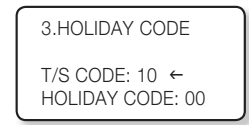
The Holiday Code '00' means no holiday codes are applied to the Time Schedule.

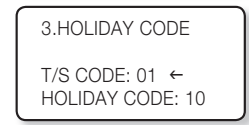
Use the buttons 4 and 6 to scroll up and down from the T/S Code 01 to 10. And, press ENT to enter a 2-digit Holiday Schedule Code. You can also press ENT to store the Holiday Index to the memory.

1. Press the F4 SETUP MENU button.
2. Use the buttons 4 and 6 to move to **HOLIDAY CODE** and press ENT .
3. Use the buttons 4 and 6 to select Time Schedule and press ENT .
   - T/S (Time Schedule) CODE : 01~10
4. Use the numeric buttons to enter 2-digit holiday code.
   - HOLIDAY CODE : 01~10
   - If the entry is invalid, the **"INVALID NUMBER"** message will appear.
5. Repeat steps 3 through 4 above to set other time schedules.
6. Upon completion of all holiday code settings, exit the menu by pressing ESC .









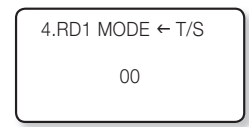
READER MODE TIME SCHEDULE

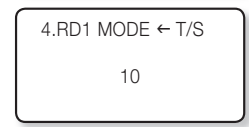
READER #1 MODE TIME SCHEDULE

There are 3 reader modes (in READER #1) including ID Mode, ID+F/P Mode and ID+PW+F/P Mode. Unless otherwise set specifically, all registered users should be verified according to the reader mode in use. However you may allow entry with card only during a certain time interval for all users.

For example, suppose you want to access the door by only presenting a card from 09:00 to 17:00 and use the Fingerprint Verification method for the rest of the time. And, you can do so by setting [READER1 MODE SETTING] to ID+F/P Mode which will be general operation mode, and program a T/S Code "01" so that it can include a time period between 09:00 and 17:00 for card access. And, link the programmed Time Schedule Code 01 to the READER1 MODE Time Schedule setting.

1. Press the F4 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **RD1 MODE ← T/S** item and press ENT .
3. Use the numeric buttons to enter 2-digit code and press ENT .
   - T/S(Time Schedule) CODE : 00~10
   - If the entry is incorrect, the "INVALID NUMBER" message will appear.
   - The T/S Code "00" indicates no Time Schedule is to be applied.



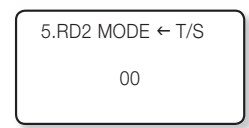


READER #2 Mode Time Schedule

There are 2 reader modes (in READER #2) including ID Mode and ID+P/W Mode. Unless otherwise specified, all registered users should be authenticated to the reader mode in use. However you may allow entry with card only during a certain time interval for all users.

For example, suppose you want to access the door by only presenting a card from 09:00 to 17:00 and use the Fingerprint Verification method for the rest of the time. And, you can do so by setting [READER2 MODE SETTING] to ID+P/W Mode which will be general operation mode, and program a T/S Code "01" so that it can include a time period between 09:00 and 17:00 for card access. And, link the programmed Time Schedule Code 01 to the READER2 MODE Time Schedule setting.

1. Press the F4 SETUP MENU button.
2. Use the buttons 4 and 6 to move to **RD2 MODE ← T/S** and press ENT .
   - It can be configured in the same way as READER#1 Mode Time Schedule setting.



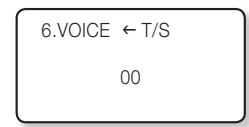
VOICE MESSAGE TIME SCHEDULE

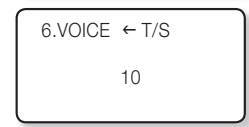
The Voice Message Time Schedule function allows you to apply time schedules to the voice message output and mute them at other times.

To apply a time schedule code, enter the time schedule code you want. Within the time range assigned by the time schedule, voice messages will be played while at other times, they will not be played.

Using this feature, for example, you can configure the unit to play voice messages in the daytime and mute them at night.

1. Press the F4 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **VOICE ← T/S** and press ENT .
3. Use the numeric buttons to enter 2-digit code and press ENT .
   - T/S(Time Schedule) CODE : 00~10
   - If the entry is incorrect, the **"INVALID NUMBER"** message will appear.
   - The T/S Code 00 indicates no Time Schedule is to be applied.

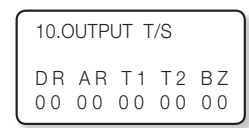


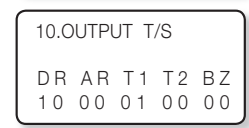


OUTPUT TIME SCHEDULE SETUP

You can link a Time Schedule Code to each output. The default Time Schedule Code for every output is "00", which means no Time Schedule is applied to them. Changing these settings can be very useful when you want to leave the door open during a certain time period.

1. Press the F5 SETUP MENU button.
2. Use the buttons 4 and 6 to move to **OUTPUT T/S** and press ENT .
3. Use the numeric buttons to enter 2-digit code for each item and press ENT .
   - T/S(Time Schedule) CODE : 00~10
     DR : Door Relay Output T/S code
     AR : Alarm Relay Output T/S code
     T1 : TTL#1 Output T/S code
     T2 : TTL#2 Output T/S code
     BZ : Buzzer Output T/S code
   - If the entry is incorrect, the **"INVALID NUMBER"** message will appear.
   - The T/S Code '00' means no Time Schedules are to be applied.

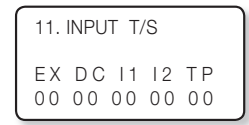


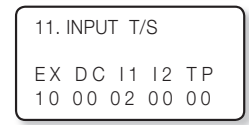


INPUT TIME SCHEDULE SETUP

You can assign a Time Schedule Code to each input to activate the input only during that period. The default Time Schedule Code for every input is "00", which means no Time Schedule is applied to them. Changing these settings can be very useful when you want to activate PIR sensor during a certain period of time.

1. Press the F5 SETUP MENU button.
2. Use the buttons 4 and 6 to move to **INPUT T/S** and press ENT.
3. Use the numeric buttons to enter 2-digit code and press ENT.
   - T/S(Time Schedule) CODE : 00~10
     EX : EXIT Button Input T/S Code
     DC : Door Contact Sensor Input T/S Code
     I1 : Aux Input#1 T/S Code
     I2 : Aux Input#2 T/S Code
     TP : Tamper Switch Input T/S Code
   - If the entry is incorrect, the **"INVALID NUMBER"** message will appear.
   - The T/S Code '00' means no Time Schedules are to be applied.



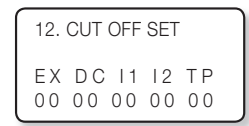


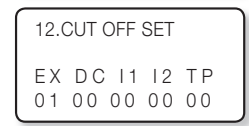
INPUT CUT OFF CHECK SETUP

You can choose whether or not to check the connection cutoff of each input port. The default setting is "00". To enable the cut off check function, change the setting to "01".

In case of cut off detected at the input while the cut off check enabled, the corresponding output signal is given as per "Cut Off Output Setup". (See Page 46.)

1. Press the F5 SETUP MENU button.
2. Use the buttons 4 and 6 to move to **CUT OFF SET** and press ENT.
3. Use the numeric buttons to enter "00" or "01" for each input.
   - 00 : The Input Cut Off check function is disabled.
     01 : The Input Cut Off check function is enabled.
   - EX : Whether to use EXIT Button input cut off check.
     DC : Whether to use Door Contact Sensor input cut off check.
     I1 : Whether to use Aux Input #1 input cut off check.
     I2 : Whether to use Aux Input #2 input cut off check.
     TP : Whether to use Tamper Switch input cut off check.
   - If the entry is incorrect, the **"INVALID NUMBER"** message will appear.





▪ Before enabling this function, a 2.2KΩ resistor should be connected between the input wire and the GND.

additional features

EVENT MEMORY SETUP

1. Press the F2 SETUP MENU button.
2. Use the buttons 4 and 6 to move to **EVENT MEMORY** and press ENT.
3. Use the buttons 4 and 6 to select either **USE** or **NOT USE** and press ENT.
   - → USE : When the event memory is full, it gives out an error message and maintains all events stored in the memory.
   - → NOT USE : Even when the event memory is full, it does not give out an error message. In this case the last event saved in the memory is replaced with the next new one. Select 'NOT USE' for standalone use (only for entry access exclusively).

1.EVENT MEMORY
NOT USE

1.EVENT MEMORY
→ NOT USE

1.EVENT MEMORY
→ USE

■ The default setting is "USE".

ID DISPLAY

1. Press the F2 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **ID DISPLAY** item and press ENT.
3. Use the buttons 4 and 6 to select **MESSAGE** or **ID + MESSAGE** and press ENT.
   - MESSAGE : Instead of a text message and the user ID, the text message of "*********" will appear on the screen.
   - ID + MESSAGE : The User ID along with a text message will appear on the screen.

2. ID DISPLAY
MESSAGE

2.ID DISPLAY
→ MESSAGE

2.ID DISPLAY
→ ID + MESSAGE

<MESSAGE>

****
ACCESS GRANTED!
MYID
01/01 16:25 :07

<ID + MESSAGE>

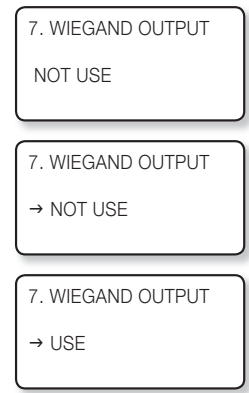
12345678
ACCESS GRANTED!
MYID
01/01 16:25 :07

- The "MYID" in the picture is a user name which will be displayed if the ID and name were registered using the provided application software. (See Page 26 for "Name Display".)

additional features

WIEGAND OUTPUT SETUP

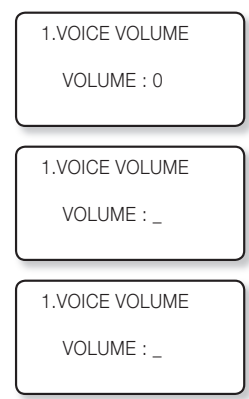
1. Press the F2 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **WIEGAND OUTPUT** item and press ENT .
3. Use the buttons 4 and 6 to select either **USE** or **NOT USE** and press ENT .
   - → USE : It sends 26 bit Wiegand Output (34 bit for SSA-S30X1 series) through two TTL output ports (TTL OUT #1, TTL OUT #2), which can be used as a reader in connection with other controller.
   - → NOT USE : This product cannot be used as a reader.



- When it is set to 'USE', the TTL #1 and TTL #2 outputs are disabled except for WIEGAND Outputs.

VOICE VOLUME SETUP

1. Press the F3 SETUP MENU button.
2. Use the buttons 4 and 6 to move to **VOICE VOLUME** and press ENT
3. When done, press ENT to save your settings.
   - You can adjust the volume of the voice in 5 levels from 0 (mute) to 4 (maximum)

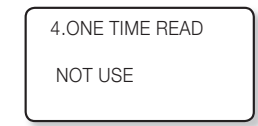


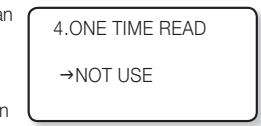
- Adjust the volume level to "0" to disable voice output.
- If you enter a value higher than '5', the "INVALID NUMBER" message appears and the volume stays at the previous setting.

ONE TIME READ

If the menu is set to “USE”, the card authentication will not take place for the next 30 seconds after an instance of authenticating a registered card.

1. Press the F3 SETUP MENU button.
2. Use the buttons 4 and 6 to move to **ONE TIME READ** and press ENT .
3. Use the buttons 4 and 6 to select either **USE** or **NOT USE** and press ENT .
   - → USE : The card authentication will not take place for 30 seconds after an instance of authenticating a registered card.
     For unregistered cards, the authentication process will be attempted repeatedly.
     When another registered card is successfully authenticated within 30 seconds from the first normal authentication by a registered card, it is possible to authenticate the first card again not requiring the time lag of 30 seconds.
   - → NOT USE : Continuous re-authentication of a registered card is enabled.





■ The default setting for One Time Read is “NOT USE”.

VERSION CHECK

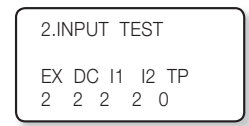
1. Press the F9 SETUP MENU button.
2. Use the buttons 4 and 6 to move to **FIRMWARE VER.** and press ENT .
3. The firmware version of the unit is displayed.

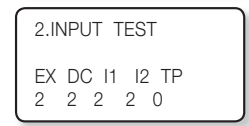
additional features

INPUT TEST

This feature allows you to test settings for each input.

1. Press the F9 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **INPUT TEST** item and press ENT .
3. The corresponding value changes upon input.
   - 0 : It indicates that the input port is open circuit.
     1 : It indicates that the input port is short circuited at the earth-grounding level.
     2 : It indicates that the corresponding port is not connected.
   - EX : Exit Button Input
     DC : Door Contact Sensor Input
     I1 : Auxiliary Input #1
     I2 : Auxiliary Input #2
     TP : Tamper Switch Input

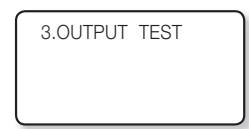


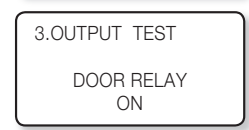


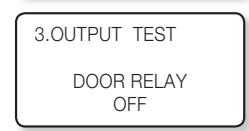
OUTPUT TEST

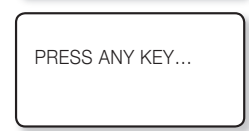
This feature allows you to test settings for each output.

1. Press the F9 SETUP MENU button.
2. Use the buttons 4 and 6 to move to **OUTPUT TEST** and press ENT
3. Press ENT to turn ON/OFF the DOOR RELAY, ALARM RELAY, TTL#1, TTL#2, BUZZER in sequence.
   - DOOR RELAY (ON/OFF)
     ALARM RELAY (ON/OFF)
     TTL#1 (ON/OFF)
     TTL#2 (ON/OFF)
     BUZZER (ON/OFF)
4. Press any key to move to the parent menu.







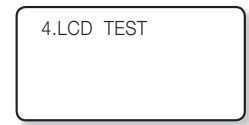


- The first two tests verify if the output relays (Door Relay and Alarm Relay) are working properly. You can hear the mechanical sound of relay with a blinking LED indicator.
  The next two tests are to verify TTL#1 and TTL#2 outputs. Finally, the last test is for an Internal Buzzer test. You can hear two beeps during the test.

LCD TEST

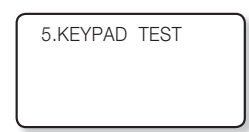
This feature allows you to test the LCD status. The SAMSUNG logo will appear rolling up and down. At this time you can check any abnormality in the LCD.

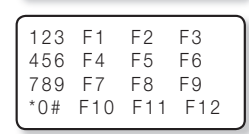
1. Press the F9 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **LCD TEST** item and press ENT.
   - Check the SAMSUNG logo.
3. The last date the firmware is amended and the version information is displayed.



KEYPAD TEST

1. Press the F9 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **KEYPAD TEST** item and press ENT.
3. When the Keypad Test screen appears, try to press each key one by one. The depressed key will disappear from the screen.
   - ∗ : ESC on the keypad
     # : ENT on the keypad



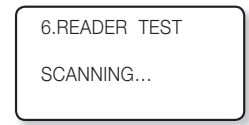


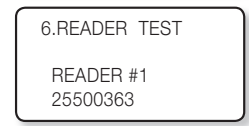
additional features

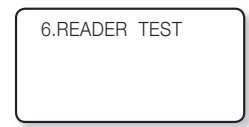
READER TEST

This function allows you to test the internal (READER #1) and the external readers (READER #2).

1. Press the F9 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **READER TEST** item and press ENT .
3. Place your card close to the reader. When the card is read successfully, the reader number with the 8-digit card number will be displayed on the screen.
4. Press ESC to move to the parent menu.

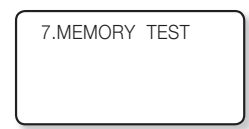


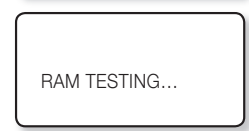




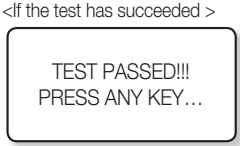
MEMORY TEST

1. Press the F9 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **MEMORY TEST** item and press ENT .
3. Press ENT to start the test.
4. Please see the pictures below for the screens when the test has succeeded and failed.

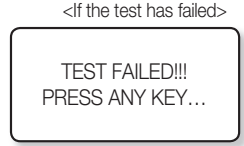




<If the test has succeeded >



<If the test has failed>



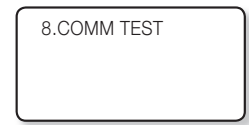
5. Press any key to move to the parent menu.

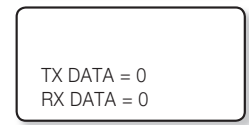
- If the Data Memory has a problem, the “TEST FAILED” message will be displayed on the screen. If this is the case, contact the nearest Service Center for technical support.

COMMUNICATION TEST

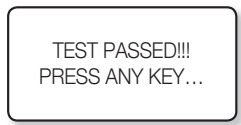
Before executing this test, remember to connect the RS-232 TX wire (Black wire with White stripe) and the RS-232 RX wire (Red wire with White stripe) together. This is to test on the built-in communication chip, not on the communication with the computer.

1. Press the F9 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **COMM TEST** item and press ENT.
   - TX DATA : Transmit Data
     RX DATA : Receive Data
3. Press ENT to start the test.
4. Please see the pictures below for the screens when the test has succeeded and failed.





< If the test has succeeded >



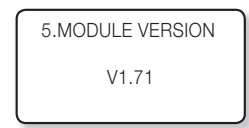
< If the test has failed >

5. Press any key to move to the parent menu.

▪ If the communication is malfunctioning, the "TEST FAILED!!!" message will be displayed. If this is the case, contact the nearest Service Center for technical support.

FINGERPRINT MODULE VERSION CHECK

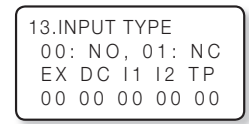
1. Press the F10 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **MODULE VERSION** item and press ENT.
   - The version of the fingerprint module will be shown.

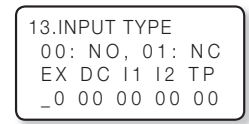


INPUT TYPE SETUP

Either one of NO(00) or NC(01) is available for the input type.
The default setting is '00(Normal Open)'.

1. Press the F3 SETUP MENU button.
2. Use the buttons 4 and 6 to move to the **INPUT TYPE** item and press ENT .
3. You can make input when the prompt blinks.
   - Use the numeric buttons to enter '00' or '01' for operation type for each input and press ENT .
     NO: Normal Open, open is normal
     NC :Normal Close, close is normal
     EX : Exit Button
     DC : Door Open Sensor
     I 1 : Aux Input #1
     I 2 : Aux Input #2
     TP : Tamper Input



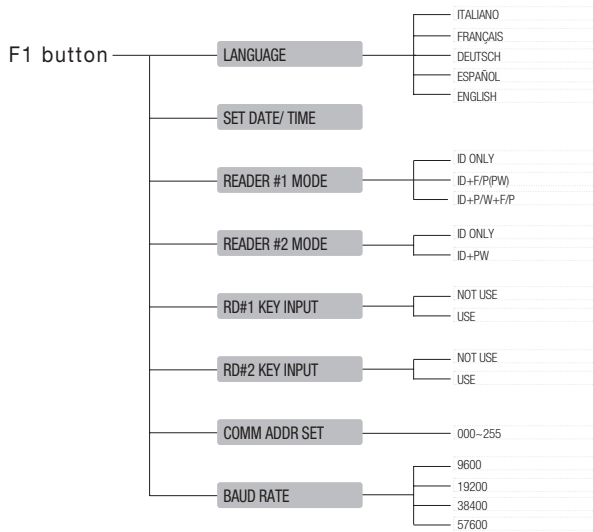


- If values other than '00' or '01' are entered, the error message of "INVALID NUMBER" will appear and the values you entered will not be saved.
- Check the operation type of the input device that is connected to the input port. If the operation type is set incorrectly, it will cause unintended result.

MENU STRUCTURE

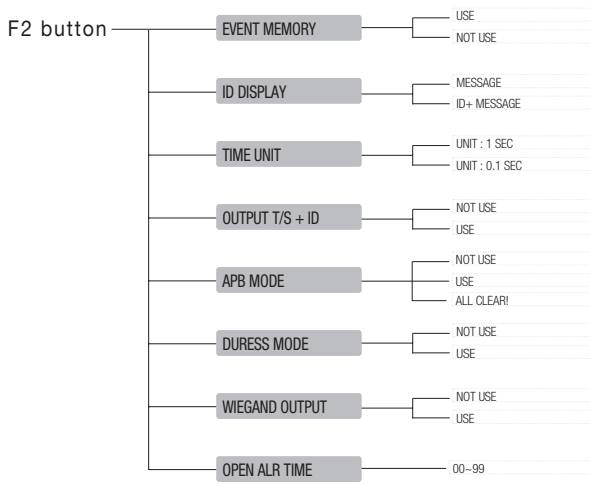
Menu Structure of the [F1] button

You can set Language, Date/Time and READER modes.



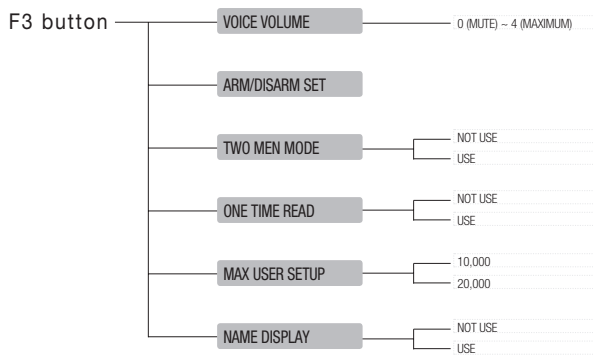
Menu Structure of the [F2] button

You can set Event Memory, ID Display, Time Unit Setup, Output Time Schedule + ID, Antipassback Mode, Duress Mode, WIEGAND Output, and Door Open Timeout Alarm.



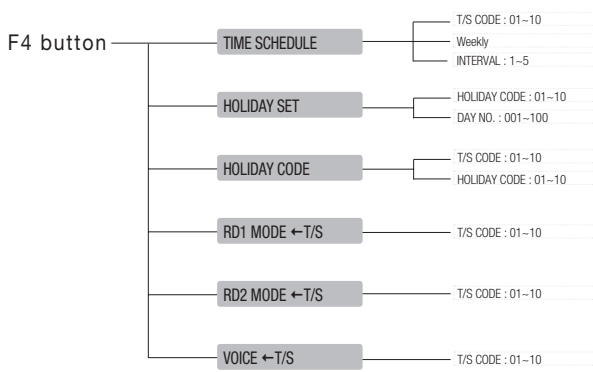
Menu Structure of the [F3] button

You can set Voice Volume, Arm/Disarm, Two Men Operation, One Time Read, Number of Users, and Name Display.



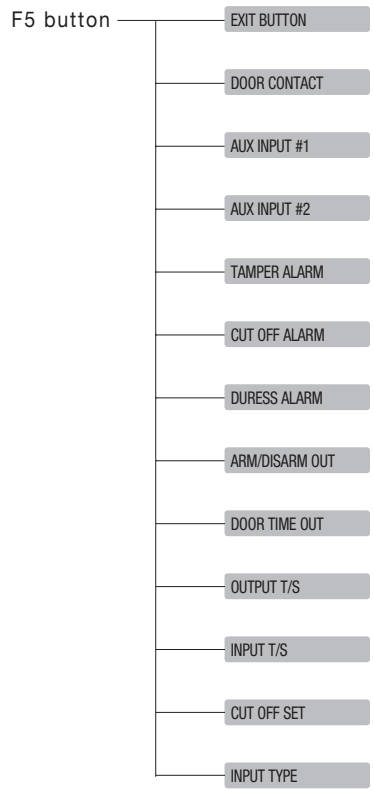
Menu Structure of the [F4] button

You can set Time Schedule, Holiday, Holiday Code, READER #1 and #2 Mode Time Schedule, and Voice Message Time Schedule.



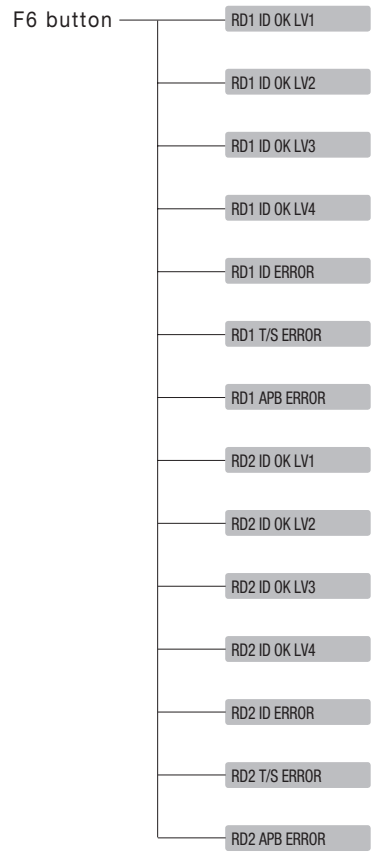
Menu Structure of the [F5] button

You can set Exit Key Output, Door Contact Sensor, Aux Input #1 and #2, Tamper Alarm Output, Cut Off Output, Duress Alarm Output, Arm/Disarm Output, Door Open timeout Output, Input/Output Time Schedule, Input Cut Off Check, and Input Type.



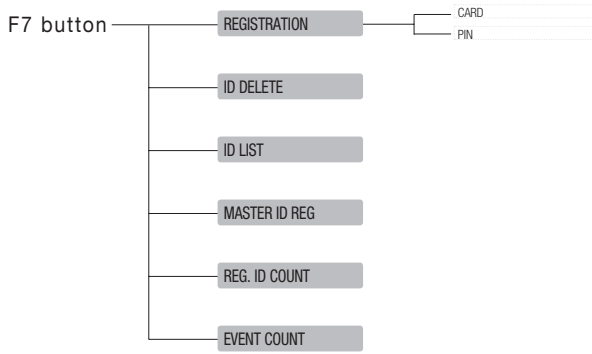
Menu Structure of the [F6] button

You can set Output for Accessible levels for READER #1 and #2 ID, READER #1 and #2 ID Error Output, READER #1 and #2 Time Schedule Error Output, READER #1 and #2 Antipassback Error Output.



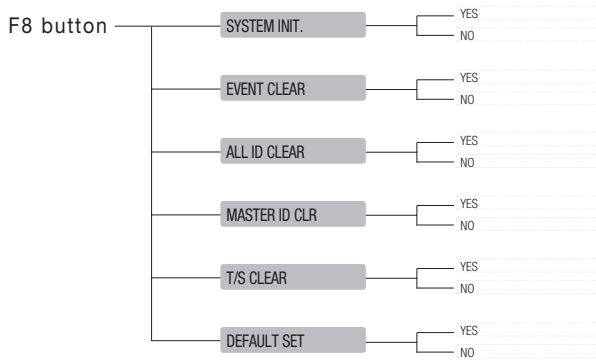
Menu Structure of the [F7] button

You can register or delete IDs and register the master ID. You can also view the ID list, ID count and event count.



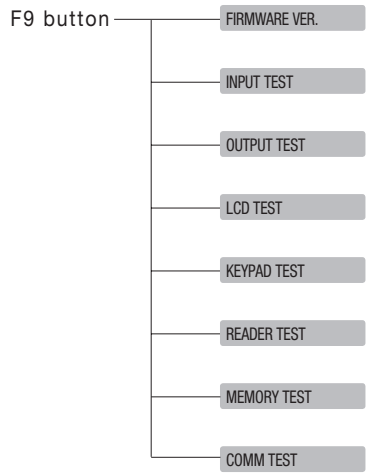
Menu Structure of the [F8] button

You can initialize the master mode and delete the entire events, IDs, Master ID and Time Schedules.



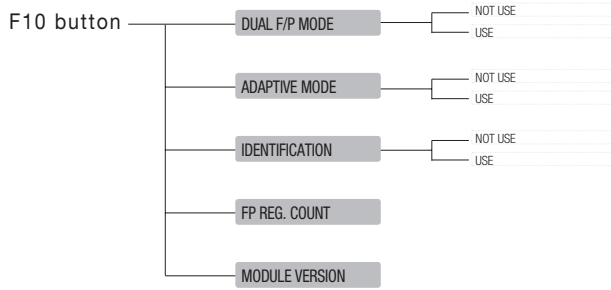
Menu Structure of the [F9] button

You can check the system version. You can also test the input, output, LCD, keypad, reader, memory and communication status.



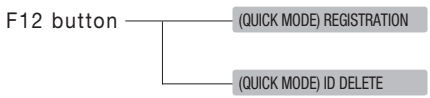
[Menu Structure of the [F10] button

You can set the Dual Fingerprint Mode and ID Modes, and check the number of registered fingerprints and the fingerprint module version.



Menu Structure of the [F12] button

You can easily register or delete IDs without going through a complex setup procedure.



DEFAULT SETTINGS

Output Settings for Input Sources

Input \ Output	Door Relay (DR)	Alarm Relay (AR)	TTL#1 (T1)	TTL#2 (T2)	Buzzer (BZ)
[1] Exit Button	03	00	00	00	00
[2] Door Contact	00	99	00	00	00
[3] AUX Input #1	00	00	00	00	00
[4] AUX Input #2	00	00	00	00	00
[5] TAMPER Alarm	00	99	99	99	99
[6] Cut Off Alarm	00	00	00	00	00
[7] DURESS ALARM	00	00	00	00	00
[8] ARM/DISARM OUT	00	00	00	00	00
[9] Door Open Timeout	00	99	00	00	00
[10] Output Time Schedule	00	00	00	00	00
[11] Input Time Schedule	00	00	00	00	00
[12] Cut Off Check	00	00	00	00	00
[13] Input Type	00	00	00	00	00

1) Index No. [1] ~ [9]
   The values indicate the operating time of each output for the input signal.
2) Index No. [10]
   The values indicate the time schedule code (index) applied to each output.
3) Index No. [11]
   The values indicate the input port ([1]Exit Button ~ [5]Tamper S/W).
   Each value indicates the code of Time Schedule to be applied to the corresponding input port.
4) Index No. [12]
   The values indicate whether or not to use the cut off check feature for each input.
   (0 – Not Use, 1 – Use)
5) Index No. [13]
   The values indicate whether the input type is NO(Normally Open) or NC(Normally Closed).
   (0 – NO, 1 – NC)

Output Setting for Authentication

Input \ Output	Door Relay (DR)	Alarm Relay (AR)	TTL#1 (T1)	TTL#2 (T2)	Buzzer (BZ)
[1] Reader#1 ID OK LV1	03	00	00	00	00
[2] Reader#1 ID OK LV2	05	00	00	00	00
[3] Reader#1 ID OK LV3	05	00	00	00	00
[4] Reader#1 ID OK LV4	05	00	00	00	00
[5] Reader#1 ID Error	00	03	00	00	00
[6] Reader#1 T/S Error	00	03	00	00	00
[7] Reader#1 APB Error	00	03	00	00	00
[8] Reader#2 ID OK LV1	03	00	00	00	00
[9] Reader#2 ID OK LV2	05	00	00	00	00
[10] Reader#2 ID OK LV3	05	00	00	00	00
[11] Reader#2 ID OK LV4	05	00	00	00	00
[12] Reader#2 ID Error	00	03	00	00	00
[13] Reader#2 T/S Error	00	03	00	00	00
[14] Reader#2 APB Error	00	03	00	00	00

1) Index No. [1] ~ [14]
The values indicate the operating time of each output for the input signal.

TROUBLESHOOTING

If the product does not function properly, please see the below for trouble shooting.

PROBLEM	SOLUTION
A valid card that had been in use became unregistered after batch-downloading IDs from a PC.	1) The card ID might be registered only to the controller and not to the PC. During the process of batch-downloading IDs from the PC, the PC first erases the ID memory in the unit and rewrites from the beginning. This trouble can happen if those IDs were not registered on the PC at the point of batch-downloading. 2) Check whether the card ID is registered on the PC or not. 3) If not, please register the card ID and try again. 4) If the trouble persists after following the procedures above, contact a designated service center.
I entered the Master ID "00000000" but I still cannot enter the Setup Mode ("0000000000" for SSA-S30X1)	1) Try changing the Master ID using the application software. (The Master ID will be changed to the value of your choice.) 2) If the product does not function properly, follow the steps below to initialize the system : After the installation and connections are completed, press the initialize button and apply power (+12V DC) to turn on the product. You will see the "Initialize OK? 0:No 1: Yes" message on the screen. Press the button 1 if you want to initialize the system. After all the initialization process is completed, the system will be operating on the normal mode and the screen will display the SAMSUNG logo, Date and Time information. 3) If the trouble persists after following the procedures above, contact a designated service center.
No problem with accessing by card, but cannot access via a manual PIN input.	1) Check whether a beep sounds when you press a key. If a beep sounds, the problem may be wrong settings. Proceed as followings: - Enter the Master ID (Default="00000000") to get into the Setup mode. ("0000000000" for SSA-S30X1) - Press the F1 button. - Select 'USE' in the [RD#1 KEY INPUT] on the screen. 2) When there is no beep sound or the problem persists after the [RD#1 KEY INPUT] has been set to 'USE', contact a designated service center.
The unit suddenly returns to the normal operating mode.	• The unit is originally programmed to go back to the normal operating mode when no buttons are pressed or no cards are read within 60 seconds in the setup mode.
The "SCHEDULE ERROR" message appears when a RFID card is being read.	1) If the unit used to be properly operating before, it is likely that there has been an electric shock that damaged the internal memory and data. Please initialize the unit as instructed in the manual. 2) Check if the ID information has been configured correctly. - Check if the Time Schedule is set to the time of your choice. - Check if the values for TA and TB are set correctly to the Time Schedule of your choice during the ID registration. 3) If this unit is connected to a PC software, use the software that allows easy settings. 4) If the trouble persists after following the procedures above, contact a designated service center.

troubleshooting

<table>
<tr><th>PROBLEM</th><th>SOLUTION</th></tr>
<tr><td>The “ACCESS DOOR ERR” message appears when a RF ID card is being read.</td><td>1) If the unit used to operate properly before, it is likely that there has been an electric shock that damaged the internal memory and data.
Please initialize the unit as instructed in the manual.
2) Check if the ID information has been entered correctly during its registration.
- Check if the value for RD is set correctly during the ID registration.
- If the RD value is set to “1”, the door opens only when READER 1 reads tthe card, and does not open when READER 2 reads the card. If the card is presented to READER 2, the “ACCESS DOOR ERROR” message will appear.
- If the RD value is set to “2”, the door opens only when READER 2 reads the card, and does not open when READER 1 reads tthe card. If the card is presented to READER 1, the “ACCESS DOOR ERROR” message will appear.
- If the RD value is set to either “0” or “3”, the door opens when either READER 1 or 2 reads the card.
3) If the trouble persists after following the procedures above, contact a designated service center.</td></tr>
<tr><td>The buzzer keeps beeping.</td><td>1) Check the door status. If the Door Contact sensor is connected and the Door Open Timeout Alarm is selected, an alarm is given.
2) Check the Door Contact sensor type: it must be NO/NC-type.
3) Check the setup value for BZ in [10. OUTPUT T/S] under the [F5] menu.
This problem can occur if the time schedule code is set to value between 01 and 10 and the present time is within the time zone of the selected schedule.
If the wrong time schedule is selected, change it to “00” (this can be set by PC software).
4) Check the Tamper switch of the unit.
5) If the trouble persists after following the procedures above, contact a designated service center.</td></tr>
<tr><td>The communication between the controller and the Host PC fails.</td><td>1) Please check the settings of the application software and the controller.
- Check if the COMM ID of the controller is registered on the application software.
- Set the different COMM ID when two or more controllers are installed.
- Check if the communication speed (57600bps is default) is the same as the setting on the software.
- Make sure that the PC’s COM port is set correctly on the S/W.
2) Check the wiring for communication.
<table>
<tr><th colspan="2">RS-232</th><th colspan="3">RS-485 (Single)</th></tr>
<tr><td>Product</td><td>PC</td><td>Product</td><td>RS-485/232 Converter</td><td>PC</td></tr>
<tr><td>RX</td><td>TX</td><td>RTX(-)</td><td>RTX(-)</td><td rowspan="2">The RS-232 cable from the converter</td></tr>
<tr><td>TX</td><td>RX</td><td>RTX(+)</td><td>RTX(+)</td></tr>
<tr><td>GND</td><td>GND</td><td></td><td></td><td></td></tr>
</table>
<table>
<tr><th colspan="4">RS-485(Multi Drop)</th></tr>
<tr><td>Product</td><td>Product</td><td>RS-485/232 Converter</td><td>PC</td></tr>
<tr><td>RTX(-)</td><td>RTX(-)</td><td>RTX(-)</td><td rowspan="2">The RS-232 cable from the Converter</td></tr>
<tr><td>RTX(+)</td><td>RTX(+)</td><td>RTX(+)</td></tr>
</table>
3) It is recommended to use termination resistors of 120 Ohm between the RTX (+) and RTX (-) wires when you are using the RS-485 communication. Apply the RS-485 converter to the same resistors.
Consult a service center or an electric technician if you are not sure how to do it.
4) When a multi-drop communication doesn’t work, test the communication one by one in order from the first one.
5) If the trouble persists after following the procedures above, contact a designated service center.</td></tr>
</table>

product specifications

PRODUCT SPECIFICATIONS

Item		SSA-S3010	SSA-S3020	SSA-S3040	SSA-S3011	SSA-S3021	SSA-S3041
User	Total Users	10,000 / 20,000 Users (Selectable)					
	Fingerprint Users	1,000	2,000	4,000	1,000	2,000	4,000
Fingerprint Templates Size		800 Bytes for 2 fingerprint Templates					
Event Buffer		20,000 / 10,000 Event Buffers (Selectable)					
Power / Current		DC 12V 540mA			DC 12V 560mA		
Reader Port		1ea: 26bit Wiegand, 8bit Burst for PIN for Anti-Pass-Back			1ea: 34bit Wiegand, 8bit Burst for PIN for Anti-Pass-Back		
Reading Time (Card)		30ms					
Verification Time		Less than 1sec.					
Identification Time		Less than 2sec.					
Door Open Time		00~99 Sec. (Default 3Sec.)					
Communication		RS-232 / RS-485(Max 32CH), TCP/IP					
Baud Rate(bps)		9,600/ 19,200 / 38,400 / 57,600(selectable)					
Input Port		4ea : Exit Button, Door Sensor, Aux#1, Aux#2					
Output Port		2ea : 2 FORM-C Relay Output (COM, NO, NC) / DC12V~18V Rating Max.2A					
		2ea : TTL Output / DC5V, Rating MAX.20mA					
		1ea: 26bit Wiegand Output Supported by TTL Output			1ea : 34bit Wiegand Output Supported by TTL Output		
LED Indicator		3 LED Indicators (Red, Green and Yellow)					
Beeper		Piezo Buzzer					
LCD		Graphic LCD (128 x 64 dots), 72.5mm x 39.5mm (2.85" x 1.56") View area					
Keypad		24 key Numeric Keypad with Back Lighting (12 Function Key included)					
LCD Display (Language)		English, Italiano, Français(Selectable) (Optional : Español, Deutsch)					
Voice Output (Language)		English (Default) (Optional : Italiano, Français, Español, Deutsch)					
Operating Temperature		0°C to +50°C					
Operating Humidity		10% to 90% relative humidity non-condensing					
Color / Material		Silver with Black / Polycarbonate					
Dimension (W x H x D)		191.5 x 159.5 x 44.0 **(mm)**					
Weight		760g					

Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)
This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.
Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.
Business users should contact their supplier and check the terms and conditions of the purchase contract.
This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

Correct disposal of batteries in this product

(Applicable in the European Union and other European countries with separate battery return systems.)
This marking on the battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66. If batteries are not properly disposed of, these substances can cause harm to human health or the environment.
To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle them through your local, free battery return system.

SALES NETWORK

SAMSUNG TECHWIN CO., LTD.
Samsungtechwin R&D Center, 701, Sampyeong-dong, Bundang-gu, Seongnam-si, Gyeonggi-do, Korea, 463-400
TEL : +82-70-7147-8740~60 FAX : +82-31-8018-3745

SAMSUNG TECHWIN AMERICA Inc.
1480 Charles Willard St, Carson, CA 90746, UNITED STATES
Tol Free : +1-877-213-1222 FAX : +1-310-632-2195
www.samsungcctvusa.com

SAMSUNG TECHWIN EUROPE LTD.
Samsung House, 1000 Hillswood Drive, Hillswood Business
Park Chertsey, Surrey, UNITED KINGDOM KT16 OPS
TEL : +44-1932-45-5300 FAX : +44-1932-45-5325

www.samsungsecurity.com
www.samsungtechwin.com

P/No. : Z8100239101A